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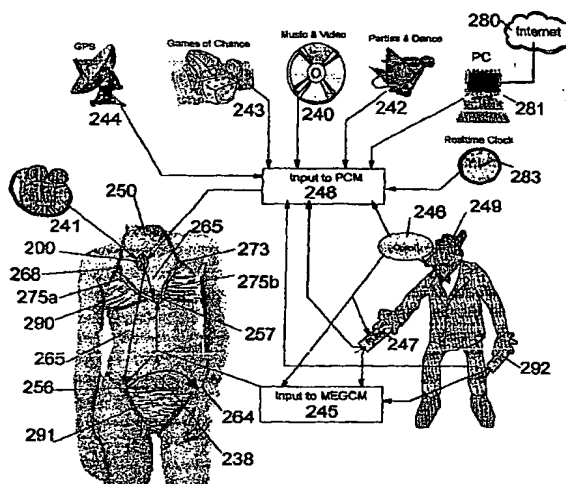
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(54) Title: GARMENTS THAT AUTOMATICALLY DISROBE IN RESPONSE TO REMOTE CONTROL MEANS



(57) Abstract: A system of removing garments from a person (250) by remote control wherein garment closures open automatically in response to remote commands issued by an operator (249). These commands include the operator's voice (246) and wireless commands issued by a Remote Undressing Means (247). A TV remote control (292) preferably may be used to issue undressing commands. Means internal to the garment closures (eg. clock (283)) may moderate opening of automated closures. Opening of garment closures may also be influenced by the GPS coordinates (244) of the wearer and by commands issued to plural wearers of auto-undress garments to enhance the enjoyment of games of chance (243), parties and dance (242) and music and video (242). Chemical light decorative means may be coupled to the garment and illuminated automatically, preferably under remote control.

# **Garments that Automatically Disrobe in Response to Remote Control Means.**

## **Introduction:**

- 5 The present invention seeks to describe as a non-limiting objective, a means to remove and/or assist removal of garments from a model (for example, a human) using automated means. The automated means preferably include electronic and/or mechanical means. Said removal is preferably under the influence of one at least:- a) remote means; and/or b) timed means; and/or c) event type and/or event frequency means; as non-limiting examples (NLE's).

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Substantial novelty appeal is expected from a means that permits a person to have their partner dressed in garments (eg bra and/or panties, and/or dress) that in part at least may come undone and/or fall off, in response to a voice command and/or other remote means. Said other remote means preferably may include as a NLE:- a remote means that includes:- a) microprocessor means, and/or b) means to output R/F and/or optical (that may include I/R frequencies) signals, wherein said signals preferably influence automated means coupled to one at least garments.

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The means of the invention are preferably not limited to novelty means and preferably may have practical applications in part at least.

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The means of the invention are preferably not limited to application with garments and preferably may have application with any other means that uses part at least of the means described for the invention. A NLE may be the automated and/or remote controlled illumination of part at least of a name tag (eg, as used in conventions). Said illumination is preferably by chemical light means and/or electrical light means (eg, LED's). Said name tag preferably may be coupled to one at least garments. Said name tag preferably may be incorporated, in part at least into one at least decorative means described later in this document.

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## **Prior Art:**

- 30 US Patent Application 20020042937, GREEN, Alison, Titled: *Garment secured by lock and garment closure system and method* is incorporated into this document in its entirety by way of reference. The present invention preferably may be applied in part at least, to part at least of the method, and/or means, and/or apparatus, and/or design, and/or drawing of said GREEN application.

## **Description of Invention:**

35 One non-limiting objective of the present invention relates to garments that as NLE's preferably include one at least of:- Lingerie; Brassieres; Women's panties; Men's underpants; Swimming costumes; Pantyhose; Dresses; Skirts; Kilts; Pants (Trousers); Blouses; Socks; Ties/cravats; Sweaters; Belts; Gloves; Suspenders (eg for female stockings and/or braces for male trousers); Fancy Dress.

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The means of the invention preferably may also be applied, in part at least, to other fashion items, NLE's of which preferably include one at least of:- Shoes; Sandals; Watches; Jewelry; Handbags. The term garment in this specification preferably may be interchanged with said *other fashion items*.

- 45 The use of the term 'Model' in this document preferably includes human(s) and/or animal(s) and/or manikin(s) and/or robot(s), that may and/or are:- donning, and/or wearing, and/or removing garments.

The use of the phrase NLE(s) may be replaced by NLE in this specification.

- 50 Known art garments are usually kept in place on a model by the following non-limiting means:- a) the linking (preferably reversibly) using closure means of at least one parts of a garment to- one at least parts of said garment and/or other garments (NLE's of said garment closure means, also referenced as GCM, preferably may include one at least of clips, clasps, buttons, keyed means (eg. chastity belts, leather apparel) zippers, bows, locks, knots, magnetic couplings, press studs, studs, laces, belts, buckles, velcro, ribbons); and/or b) the garment design (as a NLE's garments may be cut in such a way that they may be

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put on and/or taken off the body without the need for linking means (such as, for example, dresses that are put on and/or taken off over the head) and garments may include means to assist this process, eg elastic in the waist of underwear).

- 5 Reversal of the closure means (eg, undoing one at least buttons) usually require the physical manipulation of the closure means. Said reversal may also be referenced as *unlinking or opening the closure*. Removal of garments usually requires physical manipulation of said garment closure means by the wearer and/or third parties. The prior art usually requires physical manipulation of garments and/or means coupled to garments, to facilitate removal of said garments.
- 10 A Garment Closure Means (GCM) preferably provides:- a) a functional role NLE's of which preferably may include one at least of i) the zipper on a pair of trousers; ii) buttons on a shirt; iii) the clasp on a bra strap; and/or b) a novelty role (NLE's of which preferably may include one at least of:- i) a portion of the cup of a bra that may be uncoupled from part of said bra and/or removed, to expose part at least of the
- 15 underlying skin, and/or other means, ii) a portion of the front and/or back of under-panties that may be uncoupled from part of said panties and/or removed, to expose part at least of underlying body parts and/or other means, iii) additional GCM's other than those usually essential to the function of said garment, to facilitate the partial and/or complete removal of said garment from the model; iv) GCM's used for any novelty and/or other mean).
- 20 *As a non-limiting objective, the present invention preferably seeks to provide an alternative adventuresome and provocative way of wearing and in particular removing clothing, wherein said clothing may be removed and/or closure means opened, in part at least, by remote and/or automated means:-*
- 25 NLE's of said remote means preferably may include one at least of:-  
1. Audio means, NLE's of which preferably may include:- a) spoken and/or sung by a human; and/or b) music; and/or c) whistle; and/or d) animal noises; and/or e) mechanical noises; and/or f) telephone tones; and/or g) audio tones.
- 30 2. Image means; NLE's of which preferably include images of one at least:- a) humans; in part at least; and/or b) faces; and/or c) breasts; and/or d) human reproductive components (said components preferably may be in one at least possible states).  
As NLE's, said audio and/or image means preferably may include:- a) live means (eg, human voice and/or song; dog barking); and/or b) electronically generated; and/or c) microphone means; and/or
- 35 d) speaker means; and/or e) display means; and/or f) image capture means; and/or g) recorded onto and/or played from CD Disc, DVD, Tape, Memory Storage Means, Video tape (NLE's of said memory storage means preferably may include one at least of:- i) flash memory, and/or ii) SRAM (preferably may be battery backed), and/or iii) DRAM (preferably may be battery backed), and/or
- 40 iv) EEPROM, and/or v) hard disk; and/or h) delivered by telephone; and/or i) delivered by wide area networks (a NLE of which preferably may include the Internet); and/or j) delivered by Intranet; and/or k) delivered by broadcast means, (non limiting examples of which preferably may include one at least of:- i) television, and/or ii) radio, and/or iii) cable (that preferably may include fibroptic and/or coaxial as NLE's), and/or iv) satellite).
- 45 The audio means preferably may be delivered to the target means, in part at least, by the following non-limiting methods:-  
a) in its natural format, (eg sound waves through a conductive medium (eg air)); and  
b) prior to reaching the target means said sound waves preferably may be converted in part at least to a secondary format (NLE's of which preferably may include one at least of:- i) wireless, NLE's of
- 50 which preferably may include:- optical, and/or I/R, and/or RF transmissions; and/or ii) wired (NLE's of which preferably may include one at least of electrical conductors and/or fibroptic). Said converted preferably may:- a) include analogue and/or digital formats; and/or b) be encoded and/or encrypted in part at least.

The image means preferably may be delivered to the target means, in part at least, by one at least of the following non-limiting methods:- a) in its natural format (eg light waves through a conductive medium (eg air)); and b) prior to reaching the target means said light waves preferably may be converted in part at least to a secondary format (NLE's of which preferably include one at least of i) wireless (NLE's of which preferably may include optical, and/or I/R, and/or RF transmissions) and/or wired (NLE's of which preferably may include one at least of electrical conductors and/or fibreoptic). Said converted preferably may:- a) include analogue and/or digital formats; and/or b) be encoded and/or encrypted in part at least.

Audio and/or image means, in part at least, preferably may be directly delivered to the target means in a secondary format by one at least of the following non-limiting methods:- a) wireless (NLE's of which preferably may include optical, and/or I/R, and/or RF transmissions); and/or b) wired (NLE's of which preferably may include electrical conductors and/or fibreoptic). Said secondary format preferably may include analogue and/or digital formats and said secondary format preferably may be encoded and/or encrypted in part at least.

3. Commands and/or Data Means that preferably may be sent to the target means in analogue and/or digital format, preferably by one at least of the following non-limiting means:- a) wireless (NLE's of which may include:- visible light, and/or microwave, and/or I/R, and/or R/F); and/or b) wired (NLE's of which preferably may include fibreoptic; and/or coaxial; and/or electrical conductors. Said commands and/or data preferably may be encoded and/or encrypted in part at least.

It is preferable that the transfer of information from a remote means to a target means may be influenced, in part at least, by control means coupled to said remote means. NLE's of said control means may include timed means, and/or event type and/or event frequency means. As a NLE, any of the timed, and/or event type, and/or event frequency means described for EGCM later in this specification, preferably may be used, in part at least, in said control means. It is preferable that said remote means may be protected by password means.

The garment closure means of the present invention preferably includes one at least GCM's that include (and/or are coupled to):- a) automated means that facilitate unlinking of said GCM; and/or b) means that respond to remote means.

These modified GCM's are referenced as an *Enhanced Garment Closure Means (EGCM)*.

Said EGCM preferably may be constructed to open completely and/or in part only, and when open in part only, preferably may be able to further open, in part at least, one at least times. It is preferable that one at least EGCM is a NLE of said target means of said remote means. It is preferable that one at least said EGCM is coupled to part at least of the automated means of the present invention. It is preferable that said automated means facilitates opening of said EGCM.

Use of open with reference to one at least EGCM's preferably may be interpreted as one at least of:- a) open completely, and/or b) open in part only, and when opened in part only preferably may be able to further open, in part at least, one at least times, as NLE's.

It is preferable that garment closures may be closed in part at least, by part at least of the means of the present invention, and/or by prior art means and/or by any other means.

It is preferable that one at least EGCM is coupled to one at least garments such that opening of one at least EGCM's preferably results in the falling away and/or disrobing of one at least said garments in part at least, from one at least models, preferably without the need for manual intervention by the model and/or third parties.

It is preferable that one at least EGCM is coupled to one at least garments such that opening of one at least EGCM's preferably results in the part at least uncoupling, of part at least of one at least said

garments, from one at least garments, preferably without the need for manual intervention by the model and/or third parties.

- 5 A preferred non-limiting objective of the present invention is to describe a means and apparatus for closing garments using an Enhanced Garment Closure Means (EGCM) wherein, part at least of the closure means preferably may be opened using remote and/or automated means. It is the automated and/or remote, opening of closures and/or removal of garments, that is preferably one at least of the novelty features of the present invention. It is preferable that said opening results in and/or contributes to one at least garments (eg underclothing) coming apart (preferably while being worn) in part at least, and/or falling off the model. Furthermore, the present invention preferably does not require a "key" to open the closure as it is preferable that there is a manual release that may open an EGCM.

- 15 The present invention preferably allows that said EGCM may be constructed to function as a lock (eg no manual release), however, an EGCM is better considered a means of coupling garments that responds to automated and/or remote processes. The use of one at least EGCM as a lock may be only one non-limiting embodiment of the invention. It is preferable that a mechanical key means may be used to facilitate unlocking of said lock.

- 20 It is preferable that at least one at least EGCM that may not perform a reversible linking function; and/or may perform one at least other functions; and/or may not be in a closure position.

It is preferable that said EGCM's are of compact size. It is preferable that said EGCM does not interfere with the normal wear and/or fall and/or comfort of garments.

- 25 It is preferable that said EGCM includes one at least integrated circuit, preferably custom designed (eg ASIC and/or programmable logic, and/or standard cell) and/or microprocessor means.

- 30 It is preferable that said remote means includes one at least integrated circuit, preferably custom designed (eg ASIC and/or programmable logic, and/or standard cell) and/or microprocessor means.

- It is preferable said EGCM may open in response to one at least remote means and one at least EGCM's preferably includes opening means that respond to:- a) remote means; and/or b) means coupled to and/or within said EGCM.

- 35 • As a NLE, one at least EGCM preferably may open, in part at least, in response to one at least timing means, coupled to said EGCM. For example, an electronic clock means, that is preferably a realtime clock and/or calendar means and/or any other periodic counter means, may be used to control and/or signal and/or otherwise indicate that part at least, of one at least EGCM, may open in part at least. It is preferable that a) said timing means has a power means, eg battery and/or capacitor; and/or b) there is a means to update said timing means (eg change time and/or date).

- 40 • As an NLE, one at least EGCM preferably may open, in part at least, in response to one at least event logging means coupled to said EGCM.

- 45 It is preferable that there is a means to program said EGCM and/or means coupled to said EGCM, with one at least trigger means to indicate when said EGCM should open. As a NLE, said trigger means preferably include one at least:- a) timing trigger means, wherein, one at least time periods that said EGCM is to open, preferably may be programmed into means coupled to said EGCM; and/or b) event trigger means, wherein one at least remote and/or internal event triggers to facilitate opening of said EGCM preferably may be programmed into means coupled to said EGCM.

- 50 It is preferable that one at least EGCM includes one at least means to receive and/or process and/or decode and/or decrypt one at least of the NLE's of remote means previously described in this document.

- 55 Said remote means preferably may act directly on one at least EGCM's and/or indirectly on one at least EGCM's. NLE's of said indirect means preferably may include said remote means:- a) controlling a first

Enhanced Garment Linking Means and said first EGCM then controlling the uncoupling of one at least second EGCM's; and/or b) controlling a means that controls one at least EGCM's.

- 5 It is preferable that the means used by one at least first EGCM to communicate with one at least second EGCM preferably may include, as NLE's, any one at least means described for a remote means to communicate with one at least EGCM.

- 10 It is preferable that the means used by one at least second EGCM to receive information from one at least first EGCM preferably may include, as NLE's, any one at least means described for one at least EGCM to receive information from one at least remote means.

- 15 It is preferable that there is a protection means to restrict and/or prevent the unauthorised opening of one at least:- a) EGCM; and/or b) EGCM by remote means; and/or c) EGCM by automated means. It is preferable that said protection means is coupled to one at least EGCM. It is preferable that said protection means includes a password means.

- 20 It is preferable that there is a transfer means for external means (a NLE preferably may be one at least PCCM and/or remote means (eg RUM)) to read and/or write a) command and/or b) control and/or c) data means from and/or to one at least EGCM. It preferable that said external means may send a signal means to one at least EGCM requesting activation of said transfer means. It is preferable that said activation request may be blocked by manual and/or automated means. Said blocking is preferably by means coupled to said EGCM and/or one at least PCCM.

- 25 The present invention preferably may be applied in part at least, to one at least prior art GCM's. It is preferable that said GCM may be opened using their traditional means and/or by using automated and/or remote means. Preferred NLE's may include one at least of:- a) a motor (preferably small) may drive a zipper up and/or down, preferably in response to automated and/or remote commands; and/or b) a magnetic coupling may be made to uncouple by means that remove the magnetism, in part at least, with said removal preferably in response to remote means; and/or c) a press-stud coupling may be made to release by a means that is activated to propel said couplings apart - said activated is preferably in response to remote means; and/or d) a button may be made to come undone either by i) undoing it using conventional means; and/or ii) coupling and/or incorporating part at least of an EGCM to a button means, such that part at least of the button is released and/or deformed using a means that allows a first part of a garment to separate from a second part, as a NLE.

- 35 It is preferable that as NLE's:- a) locks; and/or b) facsimiles and/or replicas of locks (that may include, as NLE's, any of the locks described in said Green Application) and/or c) any other decorative and/or functional means, collectively referenced as *Decorative means*, may be coupled to said EGCM. It is preferable that said coupled may include one at least of the following:- a) attaching said decorative means to said manual release means; and/or b) designing said manual release means as said decorative means; and/or c) one at least decorative means that fits over said EGCM, in part at least; and/or d) one at least decorative means that couples magnetically to said EGCM, as NLE's. It is preferable that part at least, of one at least EGCM may resemble one at least decorative means. It is preferable that part at least, of one at least EGCM may be a lock.

- 45 It is preferable that part at least of said decorative means and/or EGCM's may resemble, and/or be scale versions, and/or be functional a) handcuffs, and/or b) padlocks, and/or c) combination locks, as NLE's.

- 50 The invention preferably allows for one at least garments that include one at least EGCM's and/or GCM's that may resemble, and/or be scale versions, and/or be functional:- a) handcuffs, and/or b) padlocks, and/or c) combination locks, as NLE's.

A mechanical key means (that may be functional) preferably may be coupled to said decorative means.

Referenced as a *Variable Decorative Means*, it is preferable that one at least EGCM may have its appearance varied, preferably after manufacture and/or distribution and/or sale and/or purchase. Said variation is preferably able to be implemented by the model and/or third parties. Non-limiting means of varying said appearance preferably include:- a) uncoupling a first decorative and/or functional means and  
 5 coupling a second decorative and/or functional means; and/or b) adding a decorative and/or functional means; and/or c) removing a decorative and/or functional means.

The prior art does not describe a means for changing the appearance of a Garment Linking Means from a first appearance to a second appearance. Those knowledgeable in the art may and/or should be able to  
 10 adapt and/or use part at least of the means of the present invention, to preferably provide a means for varying the appearance of one at least Garment Linking Means. As a NLE, said appearance may resemble one at least locks.

Referenced as a *garment illumination means*, it is preferable that one at least EGCM (and/or means coupled to said EGCM and/or means coupled to one at least garments that interface to said EGCM) illuminates and/or may be made to illuminate, in part at least. NLE's of said *illumination means* preferably include:- a) glow in the dark means (eg. using rare earth means); and/or b) chemical light means; and/or c) electrically generated light means (eg. LED's, and/or LCD's, and/or incandescent means, and/or electro-luminescent means, and/or light emitting plastics).  
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It is preferable that said illumination may be made to illuminate and/or extinguish under the influence of one at least remote and/or automated means. Said remote and/or automated means preferably may include, in part at least, those described for the present invention.

25 It is preferable that said illumination means may be coupled to said decorative means, in part at least; and/or any other means described for the invention; and/or to any other means.

It is preferable that said illumination means may illuminate in one at least shapes and/or text, NLE's of which preferably may include one at least of:- heart(s), birthday month stones; rings; anniversary symbols (eg paper; pearl, gold); body parts; greetings, age, number. It is preferable that said illumination means may illuminate in one at least colours. It is preferable that said illumination means may, in part at least, be coupled to said EGCM and/or garment after manufacture of said EGCM and/or garment. Including part at least of said illumination means within said decorative means preferably provides one non-limiting method of said coupling after manufacture.  
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Referenced as a *garment acoustic means*, it is preferable that one at least:- a) EGCM (and/or means coupled to said EGCM, and/or means coupled to one at least garments that interface to said EGCM) and/or b) PCCM, and/or c) RUM emits sound and/or may be made to emit sound, in part at least. NLE's of said *acoustic means* preferably include speaker means, and/or piezo-electric means.  
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It is preferable that said acoustic means may be made to emit sound and/or stop emitting sound under the influence of one at least remote and/or automated means. Said remote and/or automated means preferably may include, in part at least, those described for the present invention.

45 It is preferable that said acoustic means may be coupled to said decorative means, in part at least; and/or any other means described for the invention; and/or to any other means.

It is preferable that said acoustic means may, in part at least, be coupled to said EGCM and/or garment after manufacture of said EGCM and/or garment. Including part at least of said acoustic means within said decorative means may provide one non-limiting method of said coupling after manufacture.  
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It is preferable that one at least EGCM is coupled to one at least image detection and/or capture means and/or means to process said captured image information. A NLE of said image detection means may include one at least of National Semiconductors CMOS Image Sensors. Said image detection and/or capture means preferably may be added using means described for decorative means.  
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- It is preferable that the means of the present invention may be used, in part at least, in one at least of the following NLE's of entertainment means:- cinema and/or television production, commercials, live stage shows (indoor and/or outdoor). As a NLE, a model dressed in garments that in part at least may progressively come undone in response to remote signals, may provide a novel, and/or unique, and/or entertaining, and/or useful means to one at least movies, television shows, commercials, fashion shows, stage shows.
- 10 It is preferable that the means of the present invention may be used, in part at least, during a party and/or dance (and/or similar means). As a NLE a party and/or dance means preferably includes a predetermined and/or random sequence of codes to concurrently and/or sequentially unlink EGCM's on garments on one at least models, over one at least periods of the party and/or dance. Said unlinking preferably may be influenced by means coupled to one at least EGCM.
- 15 It is a non-limiting preferable objective of the present invention to include a means wherein, entertainment delivered from a preferably remote source preferably may be used to influence the uncoupling of one at least garments. As a NLE, audio and/or video from one at least of the following sources a) CD, and/or b) video, and/or c) DVD, and/or d) TV, and/or e) cable, and/or f) Internet; preferably may be a means that may open one at least EGCM.
- 20 It is a non-limiting preferable objective of the present invention to include a means wherein the Internet preferably may be used to facilitate the unlinking of EGCM. As a NLE, Internet chat rooms and/or Email and/or web pages may send one at least signals to unlink one at least EGCM at one at least locations. As NLE's, said signals may include audio and/or image means. It is preferable that one at least parties is coupled to an image capture means to send images via the Internet of the results of said unlinking of EGCM.
- 25 It is a non-limiting preferable objective of the present invention to include the method and/or process and/or apparatus of a) manufacturing one at least EGCM's and/or Personal Closure Control Means (PCCM) and/or Remote Undressing Means (RUM)), in one at least locations; and/or b) manufacturing and/or modification of one at least garments such that it may be, and/or is coupled to one at least EGCM's; and/or c) interfacing of part at least, of one at least garments to one at least EGCM's.
- 30 It is a non-limiting preferable objective of the present invention to include the method of providing conversion means for prior art garments to the means of the present invention. Said conversion means preferably includes instructions. Said conversion means preferably includes means to connect said garment to the means of the present invention.
- 35 It is a non-limiting preferable objective of the present invention to include the method of using of one at least EGCM's, in one at least games. Said game may include games of chance and/or skill. Said game may include a means to deliver alcoholic beverages. Said games may include the progressive removal of clothing, preferably using the means of the present invention. Said removal is preferably in response to various games of chance and/or skill.
- 40 It is a non-limiting preferable objective of the present invention to include the method and/or process of advertising and/or promoting one at least:- a) EGCM's and/or remote means; and/or b) garments that include one at least EGCM's; and/or c) garments for use with one at least EGCM's; and/or d) garments that may be opened by remote control; and/or e) means (that may include instructions) to couple garments to EGCM's; and/or f) adapting one at least garments for use with the means of the present invention, and/or g) instructions on how interface at least one part of a garment to at least one EGCM; and/or h) instructions on the use of any part of the invention; and/or i) any part at least of the means of the present invention. Said advertising preferably may include television, and/or cinema and/or printed matter as NLE's.
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It is a non-limiting preferable objective of the present invention to include the process and/or method, of ordering, and/or selling (that may include sale, and/or hire, and/or rental and/or leasing, as NLE's) and/or exporting, and/or importing, and/or transporting from a first jurisdiction to one at least second jurisdiction, and/or from a first location to one at least second locations, of one at least:- a) EGCM's and/or remote means and/or PCCM; and/or b) garments that include one at least EGCM's; and/or c) garments for use with one at least EGCM's; and/or d) garments that may be opened by remote control; and/or e) means to couple garments to EGCM's; and/or f) adapting one at least garments for use with the means of the present invention; and/or g) instructions on how interface at least one part of a garment to at least one EGCM; and/or h) instructions on the use of any part of the invention; and/or i) any part at least of the means of the present invention.

It is a non-limiting preferable objective of the present invention to include the process and/or method of washing and/or cleaning and/or pressing, and/or hanging, and/or storing one at least:- a) EGCM's; and/or b) garments that include one at least EGCM's; and/or c) garments for use with one at least EGCM's; and/or d) garments that may be opened by remote control; and/or e) means to couple garments to EGCM's; and/or f) garments that may be used with the means of the present invention.

It is a non-limiting preferable objective of the present invention to include the method of donning and/or wearing and/or removing garments that include the means of the present invention.

It is a non-limiting preferable objective of the present invention to include the process and/or method of closing one at least prior art garment closure means and/or one at least EGCM to facilitate wearing of one at least garments that includes means of the present invention.

It is a non-limiting preferable objective of the present invention to include the process and/or method of opening one at least prior art couplings and/or one at least EGCM, to facilitate the disrobing of one at least garments that includes means of the present invention.

As previously described, one non-limiting preferable objective of the present invention may be to use EGCM's in locations that facilitate the donning and/or removal of garments. This preferably includes functional and/or novelty means. It is another non-limiting preferable objective of the present invention to include means, wherein said EGCM's may be used more extensively as an integral-interconnect of garment components. As a NLE, a garment may be composed of a plurality of geometric shapes that may include as NLE's:- a) circles, and/or squares, and/or rectangles, and/or ovals; and/or triangles, and/or polygons; and/or b) one at least geometric shapes preferably may be coupled along one at least axes to one at least other geometric shapes. Said coupling preferably may include part at least of the means described for an EGCM. For example, a dress may be constructed from said geometric shapes (in part at least) and under the influence of a automated and/or remote means, made to uncouple, concurrently and/or sequentially.

In an environment where plural persons may have one at least components of their garments falling into a collective environment (eg, a dance floor), it is preferable that there is a means to facilitate restoration of said garment components to their owners. It is a non-limiting objective of the present invention to preferably include the method of:- a) registering ownership and/or identification of said parts (eg by electronically reading electronic ID within one at least EGCM); and/or b) electronic means used in the storage of said garment components; and/or c) electronic means in the return of said garment components.

It is a non-limiting preferable objective of the present invention to include the method and/or apparatus of protecting electronics and/or mechanical means of the invention from the washing/cleaning process, for example, protection against water and/or solvents.

It is a non-limiting preferred objective of the present invention to describe a means wherein at least a first part of garment may be influenced to uncouple from at least a second part of garment, wherein said influenced is dependent on the latitude and/or longitude and/or altitude of one at least models. The

- preferred method of meeting this objective is to couple a GPS means to one at least models. This is preferably by coupling said GPS means, in part at least, to one at least EGCM and/or decorative means and/or Personal Closure Control Means (PCCM). A NLE may include the use of the Maxim MAX2740 Integrated GPS Receiver and Synthesiser. The data sheet for this device is incorporated by reference. It is
- 5 preferable that one at least geographic coordinates may be programmed into one at least means, preferably coupled to one at least models, and preferably coupled to said GPS means. It is preferable that when said GPS means is located at one at least said geographic coordinates (preferably by the movement of said model) that it may influence opening of one at least EGCM. It is preferable that the geographic coordinates and/or any other information received by said GPS may be displayed on one at least means,
- 10 preferably one at least decorative means. As a NLE, a garment preferably includes one at least buttons that may display part at least of the received GPS information.

- It is preferable that the means of the present invention may be applied, in part at least, to other means. Said other means preferably may be made to operate in conjunction with the garment means of the
- 15 present invention. As a NLE, this may include furnishings; and/or lighting; and/or sound; and/or tableware (eg, candles); dispensing and/or consuming alcohol; and/or dispensing and/or consuming food (eg candy, chocolates); and/or money (and/or other valuables).

#### 20 Preferred Embodiment of the Invention.

- The first part of the description of the preferred embodiment references Figure 1 of the drawings.

- The invention seeks to describe a means wherein one at least garments that are being worn and/or may be worn by a model (250) are preferably in part at least held in place on said model by one at least closure
- 25 means that may be opened by a process that includes automated means. Said opening is preferably in response to one at least remote commands. Said remote commands are preferably instigated by one at least operators (249). NLE's of said operator 249 preferably may include one at least humans (eg intimate partner of the model). Said operator preferably may include the model.

- 30 The number of garments that the invention may be applied to and/or that the model may wear are preferably not limited. In the present NLE model (250) is wearing a bra (290) and panties (291). The bra (290) includes closure means (257), (268) and (273) that are coupled to automated opening means and/or means to respond to remote opening commands. The panties (291) include closure means (256) and (264) that are coupled to automated opening means and/or means to respond to remote opening
- 35 commands.

- Closure means that are coupled to automated opening means and/or coupled to means to respond to remote opening commands may be referenced as Enhanced Garment Closure Means (EGCM). The number of EGCM's that may be coupled to one at least garments are preferably not limited.
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- It is preferable that each garment using part at least of the means of the invention includes one at least EGCM's that may communicate via wireless means. Said wireless preferably includes one at least of Infrared or R/F means. This type of EGCM's is referenced as a Master EGCM (MEGCM). It is preferable that said MEGCM includes a power means (eg a battery) to power itself and/or to power other
- 45 coupled means. EGCM (257) coupled to bra (290) and EGCM (256) coupled to panties (291) are NLE's of MEGCM's.

- It is preferable that garments may be coupled to at least one EGCM's that receives power and/or opening commands and/or other information from one at least MEGCM's. This type of EGCM is referenced as a
- 50 Slave EGCM (SEGCM). The preferred means of delivering power and/or ground and/or commands and/or other signals from a MEGCM to a SEGCM is via wired electrical conductor means. Said electrical conductor means preferably include electrical wiring and/or printed circuit means. Said printed circuit means preferably includes flexible mylar means. EGCM's (268), (273), and (264) are NLE's of SEGCM's. It is preferable that part at least of said electrical conductors are embedded and/or hidden by
- 55 the fabric of the garment.

It is preferable that one at least garments may not include any MEGCM's. As a NLE (not shown) the MEGCM (256) coupled to panties (291) preferably may be replaced by a SEGCM and a conducting means connected between MEGCM (257) and the replacement SEGCM.

- 5
- It is preferable that the invention allows for a *Personal Closure Control Means* (200) to be coupled to the model (250) to provide part at least of the means of the invention. One preferred embodiment of a PCCM is as a pendant (200) that may be worn around the neck. Other NLE's of a PCCM preferably may include one at least of a wristwatch, belt buckle; bracelet; ring; earrings; key tag. EGCM's and PCCM's may be referenced as Target Means in this specification. It is preferable that:-
- 10
- \* means described for one at least EGCM's may be included in part at least in one at least PCCM's; and/or
  - \* means described for one at least PCCM may be included in part at least in one at least EGCM's and/or
  - 15 \* the PCCM (200) is the primary means of communicating with EGCM's coupled to the model wearing said PCCM.

Remote signals that may influence opening of one at least EGCM's are preferably directed to and processed by one at least PCCM. It is preferable that one at least PCCM may send opening command(s) (265) to one at least MEGM's (eg 256, 257) and/or SEGCM's (eg 264, 268, 273) by wireless means (265).

20 Said wireless means are preferably IR and/or RF.

The preferred means of said PCCM issuing commands to EGCM(s) is by R/F means. Said R/F Means are preferably one at least of Blue Tooth; 802.11 and/or Zigbee, and/or the means used for remote control units for R/F garage door openers.

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- Said PCCM Command preferably includes the transfer of one at least opening commands to one at least MEGCM's (eg 256). The target MEGCM(s) are preferably addressed by sending the preferably unique ID Means of said MEGCM(s). One at least ID Means for the EGCM's that are to be opened are preferably also sent.
  - As a NLE, should the target closure for opening be SEGCM (273), the PCCM (200) preferably addresses MEGCM (257) by the RF transmission of the ID Means of said MEGCM (257) together with the ID Means of the target SEGCM (273). Should the target closure for opening be the MEGCM (257) itself the preferred method is to include said MEGCM (257) ID Means in place of the ID Means of SEGCM (256).
  - In the present example of Figure 1 a command to open MEGCM (256) and/or (257) preferably results in said MEGCM(s) using its own power to open one at least closures of 256 and/or 257. A command to open SEGCM (264) preferably results in MEGCM 256 sending power and/or control signals along electrical conductor 238 to effect opening of SEGCM 264. Similarly a command to open SEGCM's 268 and/or 273 preferably results in MEGCM 257 sending power and/or signals along conductors 275a and/or 275b to effect opening of SEGCM's 268 and/or 273.
  - It is preferable that a command to open plural closures may be sent. Said plural command preferably includes a means to advise how many closure are being referenced.
  - It is preferable that one at least PCCM 200 may receive confirmation from one at least EGCM that said command was received and/or acted upon successfully. Said means of sending information from one at least EGCM's to said PCCM preferably includes one at least of the means described for a PCCM to communicate with said EGCM with the preferred method using one at least R/F means.
  - It is preferable that commands sent from one at least PCCM 200 to one at least EGCM's are encrypted in part at least. It is preferable that EGCM's coupled to said PCCM include the required decryption key. It is preferable that said decryption key may be loaded into said EGCM's from said PCCM.
  - It's preferable that the encryption is different on a subsequent command to open a particular closure. One non-limiting reason for this is to prevent eavesdropping.
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- One non-limiting means of varying the encryption process is to preferably include data obtained from a Real Time Clock/Calendar Means (283) coupled to said PCCM in the encryption process. It is preferable that decryption of said command may use a Realtime Clock/Calendar Means (RTCM) coupled to one at least EGCM's. It is preferable that there is a means to synchronise the RTCM's in the PCCM and coupled EGCM's.

It is preferable that one at least PCCM (200) may be coupled to a Global Positioning System Means (GPS) (244), and that as a NLE, the present and/or previously stored geographic coordinates of the model as determined by said GPS means (244) preferably may be used to influence opening of one at least EGCM's.

- as a NLE it is preferable one at least PCCM may be programmed with one at least GPS coordinates that correspond to one at least locations at which one at least EGCM may open when the model (preferably wearing said PCCM) is located at said GPS coordinate. Opening of the closure means preferably may be influenced by other means.
  - it is preferable that one at least PCCM (200) may be used to obtain part at least of the GPS coordinates that are to be programmed into it, for example:- one may walk around a performance space and gather GPS coordinates at various locations. These preferably may then be used to program said PCCM and/or one at least other PCCM's and/or provide information to other means (eg a PC program).
    - as a NLE, a dancer preferably may develop a routine wherein one at least EGCM's open when he/she is located at one at least predetermined geographic coordinates on his/her performance stage.
    - as a NLE, one at least guests at a party and/or dance preferably are sent (preferably by wireless means) a predetermined and/or random selection of GPS Coordinates (preferably corresponding to locations on the dance floor and/or location of the party) at preferably random and/or predetermined times, and one at least guests whose geographic location corresponds to the current broadcast GPS coordinates preferably has one at least EGCM's open. Said opening preferably may be influenced by other means.

It is preferable that one at least PCCM (200) includes an image capture (241) (eg CMOS Image Sensor and Lens) and/or image processing and/or image recognition means. As a NLE it is preferable that said imaging means may be used to capture an image of part at least of one at least operators (249) and preferably use this information to influence the opening of one at least EGCM's - for example the smiling face of one's partner may be required to open one at least closures.

It is preferable that opening of one at least EGCM's may be influenced by the value of Real Time Clock Means (283) that may be coupled to PCCM (200).

It is preferable that one at least PCCM may interface with one at least a) Game Tracking Means (243), and/or b) Audiovisual Management Means (240) and/or c) Party Management Means (242).

It is preferable that one at least PCCM may perform utility functions on one at least EGCM's. These are referenced as *Local Utility Means*. The reading of data from and/or writing data to one at least EGCM's to facilitate said utility functions preferably uses an IrDa interface, and/or RF means, and/or electrical conductor means.

The invention preferably allows that one at least utility function for means coupled to the invention may be performed on one at least User Controlled Data Processing Mean (UCDPM) (eg personal computer) and/or via means coupled to the Internet. These are referenced as *Extended Utility Means*. It is preferable that one at least PCCM may transfer information to and/or from a personal computer means (281) and/or the Internet (280) to facilitate said Extended Utility Means. The preferred method of communication between PCCM and UCDPM is IrDa and/or R/F. The invention preferably allows for a

means that couples to one at least UCDPM's to facilitate transfer of information between UCDPM and PCCM.

**Remote Means:** It is preferable that one at least of the following NLE's may be used by one at least operators (249) to issue closure opening commands to means coupled to one at least garment(s) (eg bra 290, panties 291) worn by the model (250):-

1) **Voice commands** (246) that preferably includes one at least of the following methods:-

- spoken commands/instructions transmitted through a medium (eg air) to one at least target means (eg 200, &/or 257, &/or 256) coupled to the model (250) and preferably received by a microphone means (not shown) coupled to said target means. The target means preferably includes voice recognition means. The preferred method is to allocate sound reception and processing functions to one at least PCCM's (200).
- intercept the transmitted sound by a means local to the operator (249). A NLE may be to include microphone and/or voice processing means in an operator (249) controlled **Remote Undressing Means (RUM)** (247). The processed information (eg commands) is then preferably sent as IR and/or R/F signals to the target means (eg 200, &/or 256, &/or 257). The preferred target means is one at least PCCM (200). As a NLE, part at least of the received sound may be digitised and the digitised format sent (eg IR and/or RF) to one at least PCCM's for further processing; and/or said digitised information may undergo voice recognition processing by means coupled to said RUM and part at least of the results of said processing are preferably sent (eg IR and/or RF) to one at least PCCM's.

2) **TV Remote Control Means** (and/or other Audiovisual RCM) (292). The means described in the preferred embodiment applies to TV remote controls that transmit using infrared. The invention preferably allows for any other means (preferably wireless) including as a NLE R/F means. The invention preferably allows that part at least of said TV Remote Control (292) may be included as part of the means of Remote Undressing Means (247).

- It is preferable the operator enters a password into said remote control unit (eg a numeric code using numeric channel selection keys) to gain access to further functions. Said password preferably being provided by the model. It is preferable that the default password(s) shipped with one at least EGCM's are printed on the enclosure of said EGCM's (eg the back surface of said EGCM where it is preferably not readily visible to the operator).
- A preferred NLE of a means to open one at least closures on one at least EGCM's may be to enter a numeric code on said remote control (preferably while pointing the I/R output towards the target means) that corresponds to a closure that may be opened.
  - One preferred NLE of a means for said operator to obtain the numeric code may be to have the model advise the operator of the password.
  - Another preferred NLE of a means for said operator to obtain the numeric codes is by determining the *PICM Numeric Value* (described later in this specification).
- A preferred NLE of a means to open one at least closures coupled to one at least EGCM's may include sequentially pressing the up and/or down channel key on said remote control means, to preferably sequentially open the next closure in sequence. A flashing LED (eg green colour) on the next EGCM's in sequence preferably may assist said third party in this endeavor. In another preferred variation the up channel key may be used to open to the next closure means in sequence and the down key to skip a closure means.
- It is preferable that one at least MEGCM coupled to a garment (eg 256 &/or 257) may respond to commands issued by TV Remote Controls. This approach

preferably provides at least one means of remotely removing garments without requiring the consumer to purchase additional control means (eg PCCM (200) and/or RUM (247) as the majority of users of the invention are likely to have access to at least one TV remote control.

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- 3) **Remote Undressing Means (RUM) 247** that preferably may transfer closure opening commands and/or other information to one at least PCCM, preferably using one at least of the RF and/or IR means described for a PCCM. It is preferable that one at least PCCM may communicate (eg RF and/or IR) with one at least RUM 247. As NLE's, it is preferable that the operator 249 may enter a)
- 10 commands on an alphanumeric keypad coupled to said RUM 247, and/or b) press predetermined command keys coupled to said RUM 247, and/or c) select from one at least menus on a display means (eg LCD) coupled to said RUM). As previously described said RUM 247 preferably may receive voice commands 246 and preferably process these in part at least for transfer to said PCCM 200 via RF and/or IR means. The invention preferably allows that said RUM 247 may include an
- 15 image capture and/or image processing means. Said image means preferably may perform part at least of the means previously described for image means coupled to one at least PCCM. One at least RUM 247 preferably may have coupled memory storage means programmed and/or edited by a) one at least PCCM's and/or b) using part at least of the means described for programming one at least PCCM's and/or EGCM's. It is preferable that part at least of PCCM and RUM functions may be
- 20 included in a single device.

**Internet Influenced Closure Opening Means (IICOM).** The invention preferably allows for a) means (eg a computer program(s)) coupled to one at least User Controlled Data Processing Means (UCDPM) 281 (eg. personal computer) and/or b) information transferred via a WAN 280 (eg the Internet); to influence

25 the opening of one at least EGCM's. The preferred method is to provide a device that interfaces to said UCDPM. The device preferably obtains power from said UCDPM. Non-limiting means of coupling said device preferably include one at least of:- the games port and/or serial port and/or parallel port and/or USB. Said device preferably transfers information to one at least PCCM (preferably by wireless means eg RF and/or IR). Said transferred information preferably influences the opening of one at least EGCM's. It

30 is preferable that information may be transferred from said PCCM to said UCDPM and/or WAN. Said information from said PCCM preferably may include images. It is preferable that computer and/or Internet influenced opening of EGCM's may in part at least be influenced by the progress and/or outcome(s) of a) one at least computer games and/or b) one at least computer games and/or other activities conducted using the Internet. The invention preferably allows that part at least of the means of

35 one at least IICOM may be included in one at least PCCM's.

The invention preferably allows for a **Telephone Tone Closure Opening Means (TTCOM)** (not shown) to permit telephone tones and/or other information sent via the telephone system to influence the opening of one at least EGCM's. The preferred method allows for a self powered device to couple to a telephone

40 handset and digitise telephone tones, sending the digitised results to one at least PCCM's, preferably by the wireless means previously described for a RUM 247. Those experienced in the art should be able to adapt the means described for TV Remote Control of closure opening, to be applied to a telephone keypad. The hash and star keys of said telephone keypad preferably may replace the up/down channels keys of said TV remote control. The invention preferably allows for the use of cellular phones that

45 include wireless means (eg Bluetooth, Zigbee, 802.11) to be loaded with one at least programs that may communicate with one at least PCCM 200 to influence opening of EGCM's. The invention preferably allows that part at least of the means of one at least TTCOM may be included in one at least PCCM's.

The invention preferably allows for the progress and/or outcome(s) of games (eg board and/or card games) to influence the opening of one at least EGCM's. As NLE's, said games preferably may include

50 one at least of poker, 500, bridge, canasta, blackjack, baccarat, scrabble, monopoly, trivial pursuit. The invention preferably allows for a **Game Tracking Means (GTM) 243** that as a NLE preferably may track the results of one at least participants in said game and depending on preferably predetermined and/or random and/or other means, send a preferably wireless signal (eg RF and/or IR) to one at least PCCM.

55 Said signal preferably may influence opening of one at least EGCM's. It is preferable that instead of

and/or in conjunction with influencing said opening of EGCM's that said *Game Tracking Means* 243 may advise one at least participants in said game to eat and/or drink. The invention preferably allows that said game tracking may be automatic in part at least (eg. using electronic deck(s) of cards, and/or electronic board games). It is preferable that provision of said food and/or drink may in part at least

5 under automated means (eg electronically controlled and/or operated doors and or trays). It is preferable that one at least PCCM may be programmed to restrict the EGCM's that may be influenced by said *Game Tracking Means* 243. The invention preferably allows that part at least of the means of one at least GTM may be included in one at least PCCM's.

- 10 The invention preferably allows for a *Party Management Means* (PMM) 242 at a party and/or dance and/or event, to influence the opening of one at least EGCM's. It is preferable that said PMM may be loaded with the PCCM ID means of participant models and preferably a list of the garments and/or coupled EGCM's worn by said participants. It is preferable that one at least PCCM may restrict access to one at least of its coupled EGCM's. It is preferable said PMM may be programmed with said restrictions.
- 15 The transfer of this information from PCCM to PMM is preferably by RF and/or IR means. As a NLE, said PMM preferably may be programmed with predetermined and/or random and/or other means that during part at least of a party and or dance preferably influence the transfer of information, by preferably wireless means (eg RF and/or IR), that may influence the opening of one at least EGCM's coupled to one at least participants. It is preferable said signals may include one at least of:- a) PCCM ID Means that
- 20 may be targets for closure opening and/or b) EGCM ID Means that may be targets for closure opening and/or c) GPS means, and/or d) times that one at least events may occur and/or e) the number of times that an event may occur prior to closure opening. It is preferable that one at least PCCM's (preferably coupled to participants) monitors said information sent by said PMM to determine if and/or when it is to be influenced to open one at least of its coupled closures in response to said information. As a NLE said
- 25 d) and/or e) preferably may be programmed in part at least into one at least PCCM when initially transferring information between PCCM and PMM as previously described. It is preferable that one at least PCCM may be programmed to restrict the EGCM's that may be influenced by said *Party Management Means* 242. The invention preferably allows that part at least of the means of one at least PMM may be included in one at least PCCM's.

30 The invention preferably allows for the playing of one at least audio means (eg music, songs) and/or video means (eg film clips) that influence the opening of one at least EGCM's and the preferred means includes uses of *Audiovisual Management Means* (AMM) 240. The invention preferably allows for the advertising and/or production and/or distribution and/or sale and/or playing of:- a) audio and/or b) visual

35 and/or c) other means that:- i) interface with said AMM 240 and/or ii) may influence the opening of one at least EGCM's.

- 1) NLE's of means of supplying said audio and/or video means preferably includes one at least of CD, DVD, Internet, Memory Storage Means, Videotape, Cable, live performances (eg concerts, fashion shows).
- 40 2) It is preferable that said AMM is coupled to means that may receive and/or process information that relates to the playing of said audio and/or visual means. Preferably in response to part at least of said received and/or processed information, said AMM preferably transfers (eg by RF and/or IR means) information to one at least PCCM that preferably influence the opening of one at least EGCM's on one at least models.
- 45 3) *Trigger Means* for influencing the opening of at least one EGCM in response to audio and/or visual means preferably includes one at least of the following NLE's:-
  - *Broadcast Sound Trigger Means* that preferably includes one at least of the following NLE's:-
    - 50 ▪ one at least audio means (eg CD and/or DVD) preferably may include one at least predetermined sounds in the sound track, wherein said predetermined sounds are preferably recognised by said AMM as a trigger to garment closure opening. This type of trigger is referenced as *Predetermined Embedded Audio Means (PEAM)*. As a NLE one at least PEAM preferably may includes a first frequency playing for a first period of time and a second frequency playing for a second period of time. It is
    - 55 preferable that plural codes may be created by varying frequency and/or period. It

is preferable that one at least AMM's is preprogrammed with one at least PEAM and/or is coupled to means to recognise said PEAM. It is preferable that one at least PEAM's is generic to a plurality of different audio tracks. It is preferably that one at least PEAM's may be a predetermined phrase (eg 'drop your goodies'). One at least AMM preferably digitises the transmitted sound and processes this information looking for digital formats that match and/or approximate previously stored digital formats.

- one at least audio means (eg CD and/or DVD) preferably may include one at least custom sounds in the sound track, wherein said custom sounds are preferably recognised by said AMM as a trigger to garment closure opening. This type of trigger is referenced as *Custom Embedded Audio Means (CEAM)*. It is preferable that there is a means to assist one at least AMM's to recognise one at least CEAM's. It is preferable that one at least PEAM's may trigger one at least AMM's to seek out CEAM's in the incoming sound. As a NLE it is preferable that said means to assist includes one at least of:-

- a. including part at least of one at least means on an audio means (eg CD and/or DVD) as a soundtrack of one at least CEAM's. Said CEAM's preferably relate in part at least to those used in sound/music on the coupled audio means and/or on other audio means. This is preferably played while one at least AMM is programmed to digitises the transmitted sound, preferably storing it in a database for future use
- b. including one at least CEAM's in a preferably pre-digitised digital format on a memory storage means (eg flash memory, CD (that preferably may include coupled songs/music/video)) that preferably may be distributed with the coupled music/songs/video means and preferably may be read by means coupled to one at least AMM's.
- c. distributing one at least CEAM's via one at least WAN's (eg Internet, Intranet). It is preferable that one at least PCCM may act as a means to facilitate transfer of information between WAN and AMM.

Broadcast Trigger Means (BTM) preferably rely on means coupled to one at least AMM digitising sound produced from the playing of one at least Audio means (eg a music CD playing on a CD Player) and comparing said digitised sound with previously digitised closure opening triggers. Said AMM preferably includes Digital Signal Processing Means.

- One at least AMM preferably may handle one at least *Time Managed Trigger Means (TMTM)* that preferably include a list of one at least times (preferably in reference to an origin of zero) that preferably may be transferred into one at least AMM. It is preferable that when said AMM is instructed to access one at least TMTM it preferably issues signals to influence one at least EGCM's to open as instructed by said TMTM. It is preferable that one at least TMTM may include other codes to permit the use of different types of TMTM. A non-limiting method of preparing one at least TMTM's preferably includes listening to audio and/or viewing visual means and preparing a listing of times relative to an origin (eg the start of a song) that it is desired to influence the uncoupling of garments. Non-limiting means for distributing one at least TMTM preferably include one at least of those described for Broadcast Trigger Means. It is preferable that one at least AMM may use BTM and/or TMTM ( as a non-limiting example, BTM may be used at the start of a song to trigger the start of TMTM).

It is preferable that one at least first triggers may be differentiated from one at least second triggers and said first preferably may have a first effect (eg influence opening of closures on all participants as a NLE) and said second preferably may have a second effect (eg influence opening of closures on one participant as a NLE).



The invention preferably allows that part at least of the means described for said Audiovisual Management Means 240 may be combined with part at least of the means described for said Party Management Means 242. It is preferable that said *Party Management Means* 242 and *Audiovisual Management Means* 240 may be combined in the same device. The invention preferably allows that part  
 5 at least of the means of one at least PMM may be included in one at least AMM's.

The next part of the description references Figure 1a of the drawings that shows preferred non-limiting embodiments of EGCM's. NLE's of said EGCM are shown as 1a, 1b and 1c of Figure 1 of the drawings. Said EGCM may be constructed from any means, with the preferred method using plastic (preferably  
 10 injection moulded), in part at least. It is preferable that one non-limiting function of said EGCM is to couple one at least parts of one at least garments, to one at least other parts of said garment and/or to one at least other garments. Said coupling usually requires the physical association of said coupled parts of the garment(s) with one at least EGCM. In order to allow the garment parts to subsequently open, it is  
 15 usual for one at least parts of said garment(s) to dissociate from said EGCM and/or for said EGCM to uncouple, in part at least.

The preferred means of facilitating this objective is to couple one at least EGCM's (1a, 1b, 1c), to one at least parts of one at least garments (10a, 10b, 10c, 10d, 10e, 10f) by one at least attachment means (2a, 2b, 2c, 6a, 6b).

20 NLE's of said attachment means preferably may include one at least of:-

- *Type One Fixed Attachment Means*, wherein one at least parts of one at least garment(s) (10a, 10b) are preferably physically coupled to one at least attachment means (2a, 2b), and said attachment means are preferably fixed to one at least EGCM 1a. NLE's of said attachment means preferably include:-

- 25 • moulding one at least plastic rings 2a into the case of one at least EGCM 1a; and/or
- embedding ( eg, during manufacture) one at least metallic rings 2b into the plastic case of one at least EGCM 1a;
- said physically coupled preferably refers to means that are not usually readily reversibly detachable;
- 30 • NLE's of said physical coupled preferably may include the sewing (eg by thread) 3a of part of a garment 10a to said attachment means 2a and/or the coupling by adhesive means (that may include thermal processes) 3b of part of a garment 10b to attachment means 2b.

35 One non-limiting means of permitting said coupled garment parts to separate, may be to have the means of the present invention facilitate the separation of part at least of said EGCM 1a along the line 5, as a NLE. In other embodiments said EGCM 1a may not separate.

and/or

- 40 • *Type Two Fixed Attachment Means*, wherein one at least parts of one at least garments 10c are preferably reversibly physically coupled to one at least attachment means 2c, and said attachment means are preferably fixed to one at least EGCM 1b. NLE's of said attachment means may include:-

- 45 • moulding one at least plastic rings 2c into the case of one at least EGCM 1b; and/or
- embedding ( eg, during manufacture) one at least metallic rings (not shown) into the plastic case of one at least EGCM 1b;
- reversibly physically coupled preferably refers to means that are usually reversibly detachable.
- NLE's of said reversibly physically coupled may include a clasp means 7b that preferably may be manually clipped onto said attachment means 2c and subsequently preferably unclipped manually.
- 50

and/or

- *Type One Reversible Attachment Means*, wherein one at least parts of one at least garments (10d, 10f) are preferably physically coupled to one at least attachment means (6a, 6b) and

said attachment means (6a, 6b) preferably may be unlinked from one at least EGCM (1b, 1c). Said unlinking is preferably in response to one at least remote and/or automated means. Said attachment means 6a is preferably temporarily coupled to said EGCM 1b, 1c. A non-limiting preferred means of said temporarily coupled preferably includes the insertion (in part at least) of one at least attachments (6a, 6b) into one at least *attachment receptacle means* 8;

- said **physically coupled** preferably refers to means that are not usually readily reversibly detachable;
- NLE's of said physical coupled preferably may include the sewing (eg by thread) 7a of part of a garment 10d to said attachment means 6a and/or the coupling by adhesive means (that may include thermal processes) 7c of part of a garment 10f to attachment means 6b.

and/or

- *Type Two Reversible Attachment Means*, wherein one at least parts of one at least garments 10e are preferably reversibly physically coupled to one at least attachment means 6c, and said attachment means 6c preferably may be unlinked from one at least EGCM 1c. Said unlinking is preferably in response to one at least remote and/or automated means. Said attachment means 6c is preferably temporarily coupled to said EGCM 1c. A non-limiting preferred means of said temporarily coupled preferably includes the insertion (in part at least) of one at least attachments 6c into one at least *attachment receptacle means* 8;

- said **reversibly physically coupled** preferably refers to means that are usually reversibly detachable;
- NLE's of said reversibly physically coupled may include a clasp means 7d that preferably may be manually clipped onto said attachment means 6c and subsequently preferably unclipped manually.

and/or

*Type Three Reversible Attachment Means* and/or *Type Four Reversible Attachment Means* (see below).

It is preferable that one at least reversible attachment means includes one at least *garment coupling facilitator means* (GCFM) 46 to assist coupling of garment means to attachment means. A NLE of said GCFM 46 may include the moulding of an open loop 46 into one pole of one at least reversible attachment means (6a, 6b, 6c). NLE's of how said GCFM 46 may facilitate coupling may include, as NLE's, being able to pass part of one at least garments, and/or thread and/or adhesive through said GCFM.

One at least EGCM preferably includes one at least of:-

- a power on/off means (101). This is preferably an electromechanical switch means that is preferably recessed and/or otherwise protected (eg switch may need to be activated for one at least predetermined periods) to minimise accidental operation. It is preferable that said on/off means (101) may also act as a reset means.
- Manual release means (180) eg to manually uncouple reversible attachment means (6) and/or separate one at least EGCM into plural parts (eg along line (5) of EGCM (1a).
- Symbolic indicia means 185.
- One at least visible light illumination means (99 (eg LED). This is preferably a bicolour means (eg bicolour LED). As a NLE a flashing LED may indicate that the EGCM has been activated and is functioning. A flashing red LED preferably may indicate to an operator that the EGCM will not be opening in response to remote commands. It is preferable that a green flashing LED indicates that the lock may be responsive to opening commands. It is preferable that a flashing (eg 1/4 sec flashes) LED may be used to facilitate the time one at least coupled switches are activated (eg on/off switch).
- Said EGCM is preferably coupled to a *Pulsed Illumination Count Means* (PICM). As a NLE said illumination means preferably may be a LED (99) of Figure One. Said LED is preferably bi-colour (eg red/green). A red LED (static ON or flashing)

preferably indicates that remote access to the coupled closure(s) is blocked. An illuminated green LED (static or pulsing) preferably indicates that access is available.

- 5
  - A pulsing green light preferably may be used as a means to identify one at least EGCM's from a group of EGCM's coupled to one at least garments.
  - The number of light pulses in a particular period (eg 5 secs) preferably equates to a numeric code for said EGCM (eg the channel number to push on TV remote control as NLE). It is preferable that the start of a particular period is delimited - eg. by two flashes in close proximity. It is preferable that plural PICM's coupled to one at least garments may be concurrently active. The invention preferably allows for only the PICM's coupled to the next openable closure(s) to be active.
  - For EGCM's that include plural automated closure means (eg plural reversible attachment means) it is preferable that there is an illumination means for each reversible attachment means and each illumination means preferably may output its own preferably unique numeric code.
  - When a garment is provided to a consumer it is preferable that one at least coupled EGCM includes a default PICM Numeric Value.
    - Said numeric value is preferably unique to other EGCM's coupled to said garment code for that closure(s).
    - Said Numeric Value preferably may be reprogrammed.
- 25
  - IrDa interface (detector (100) and emitter (98).
  - Detector (not shown) for infrared TV remote controls (and/or similar AV control means).
  - A conductive means to deliver power and/or ground and/or signals to one at least SEGM's.
    - A NLE is preferably conductive means 150 that delivers power and ground. In one preferred embodiment each SEGM (and/or discretely activated part of said SEGM) has its own power conductor and activation of each power conductor activates its coupled target means (eg closure opening, activation of coupled decorative means, activation of coupled LED). In a second embodiment, part at least of the means coupled to conductive means use the Dallas Semiconductors Onewire system for sending power, data and control on a single conductor. One at least SEGM's preferably includes means to respond to said onewire interface. The Dallas Semiconductor data sheets dealing with onewire devices are incorporated by reference.
    - Another NLE is preferably conductive means 155 that preferably includes power, ground and one at least known art signal lines to serially address plural coupled means (eg SEGM's)
  - A decorative means attachment means, a NLE of which preferably includes notches (160) on one side of the EGCM and notches (160a) on the opposite side of the EGCM. It is preferable that notches (160)/(160a) mate with locking means (161)/(161a) of decorative means (170) of Figure One. It is preferable that power may be delivered to said decorative means by interface 165 (preferably coupling with decorative means 170 connector 175), ground on interface 166 (preferably matching 176 on said 170), and one at least signal means (eg 167a, 167b, 167c preferably matching 177a, 177b, 177c on decorative means 170). Those experience in the art preferably should be able to adapt the means of the present invention to provide automated and/or remote controlled means to one at least decorative means, preferably including as a NLE illumination and/or sound functions. Said illumination functions preferably include display means (eg LCD's) and/or chemical light means. Said sound means preferably include speaker means.

Reference to Figure 2 of the drawings may assist understanding the next part of the description of the preferred embodiment. It is preferable that one at least EGCM may be any shape. It is preferable that the number of fixed and/or reversible attachment means that may be coupled to one at least EGCM is not limited. It is preferable that the shape and/or design of one at least EGCM is not limited. It is preferable

that the number of surfaces of one at least EGCM that attachments may be linked to is not limited. It is preferable that the number attachments that may be linked to any one at least surface of one at least EGCM is not limited. A preferred NLE of one at least EGCM (1d) is shown in 13a of Figure 2. said EGCM (1d) is triangular in shape with a linked attachment means (6a, 6a, 6b) coupled one to each side  
5 of the triangle.

A non-limiting preferred attachment means of the present invention preferably includes *Type Three Reversible Attachment Means*, wherein, one at least parts, of one at least garments preferably are coupled to one at least EGCM by a garment restraining means that preferably does not require physical  
10 attachment of one at least garment parts to an attachment means.

A preferred NLE of said Type Three Reversible Attachment Means is shown in 13b and 13c of Figure 2 of the drawings. One at least parts of one at least garments 10f are preferably physically coupled to one at least EGCM 1e that preferably includes one at least receptacle means 8. One at least parts of one at least garments 10g preferably includes an opening 11 (as a NLE, a prior art  
15 buttonhole). One at least reversible attachment means 6d are preferably placed through one at least openings 11, preferably by inserting cylindrical means 12 of said attachment means 6d through said opening 11 and preferably temporarily linking said cylindrical means 12 to receptacle means 8. An expanded view of this arrangement is shown in 13 b and a cross section view is shown in 13c. It will be appreciated that in the preceding NLE, that the attachment means 6d may be misplaced/lost when  
20 it is unlinked from the EGCM 1e. It is preferable that there is an attachment restraining means to prevent said misplacing and/or loss. A non-limiting means is shown in 13c wherein, a thread 14a is coupled at one end to garment part 10g at location 14b, and the other end of the thread is coupled to the attachment means 6d at location 14. It will be appreciated that the NLE of 13c may be used as a prior art button - the attachment means 6d when linked indirectly to garment part 10f via EGCM 1e  
25 may be considered as a button coupled to said garment part 10f, and garment part 10g may be considered the part of a prior art garment held in place by one at least buttons. The garment part 10g preferably may be manually undone by stretching buttonhole 11 over the button (in this case attachment 6d). As a NLE, one at least garments preferably may have a plurality of the arrangement shown in 13c that preferably may act, in part at least as buttons, and in part at least as the means of  
30 the present invention.

A non-limiting preferred attachment means of the present invention preferably includes *Type Four Reversible Attachment Means*, wherein, one at least parts, of one at least garments preferably are coupled to one at least EGCM by a garment restraining means that preferably does not require physical  
35 attachment of one at least garment parts an attachment means and preferably does not require physical attachment of one at least garment parts to one at least EGCM.

A preferred NLE of said Type Four Reversible Attachment Means is shown in 13d of Figure 2 of the drawings. One at least parts of one at least garments 10f and one at least parts of one at least garments 10g preferably includes an opening 11a (as a NLE, prior art buttonholes). One at least  
40 reversible attachment means 6d are preferably placed through openings 11a, preferably by inserting cylindrical means 12 of said attachment means 6d through said openings 11a and preferably temporarily linking said cylindrical means 12 to receptacle means 8 (not shown) of EGCM 1. Said EGCM 1 is preferably not physically coupled the garment. It will be appreciated that in the preceding NLE, that the EGCM 1 may be misplaced/lost when it is unlinked from attachment means 6d. It is  
45 preferable that there is an EGCM restraining means to prevent said misplacing and/or loss. A non-limiting means is shown in 13d wherein, a thread 15a is coupled at one end to garment part 10f at location 15b, and the other end of the thread is coupled to the EGCM at location 15. It will be appreciated that the NLE of 13d may be used as a prior art button.

50 It is preferable that one non-limiting embodiment of said reversible attachment means may include a plastic (preferably injection moulded) cylindrical means, with an open loop at one end preferably functioning, in part at least, as said GCFM 46.

55 It is preferable that the removal and/or undoing of one at least garments, in part at least, is facilitated by the unlinking of one at least reversible attachment means from one at least EGCM.

It is preferable that part at least of the means described for one at least EGCM may be coupled to one at least reversible attachment means (NLE's of which may include (6a, and/or 6b, and/or 6c, and/or 6d). As a NLE, said reversible attachment means preferably may include one at least of the following:- power means; electronics; power and/or signal conducting means; mechanical means ( eg propulsion means, retaining means); power means recharging means.

Reference to 13e of Figure 2 shows a NLE of an embodiment wherein said reversible attachment means 6e includes part at least of the means described for one at least EGCM. In this example the cylindrical means 12 of the previous NLE's is showed as triangular in cross section, as a NLE. The end part 91 of attachment means 6e is preferably able to rotate about the plane 90, preferably around axle 89 that preferably runs along the centre of triangular means 12. A EGCM receptacle means 8 of 13e is shown. In this embodiment receptacle means 8 preferably has a triangular cross section to accept triangular means 12. Receptacle 8 preferably has an expanded end 94 that provides space for the preferably rotatable part 91 of attachment means 6e to rotate into a position that preferably prevents its removal until rotated back again. Said rotation is preferably facilitated by the means of the present invention. NLE's of rotation means preferably include one at least motor means 93 in one at least EGCM that drives a shaft means 94, and/or said rotation preferably may be facilitated by a motor means 88 preferably within the attachment means 6e.

Reference to Figure 3 of the drawings may assist understanding the next part of the description of the preferred embodiment. It is preferable that one at least EGCM's may be coupled to one at least other EGCM, in part at least preferably via one at least attachment means. Furthermore it is preferable that one at least said attachment means is flexible, in part at least. *A NLE is shown in 16a of Figure 3.* It is preferable that one at least reversible attachment means 6f may link to plural EGCM (1f and 1g, as NLE's). It is preferable that one at least attachment means 6f may have one at least points of flexibility 214. It is preferable that said point of flexibility 214 may include rotation around one at least axes (as NLE's around the x-axis 214a and/or the y-axis 214b and/or the z-axis 214c). It is preferable that the coupling of plural EGCM may include attachment means wherein one at least points of attachment is not a reversible means. *Block drawing 41 of Figure 3* shows a NLE of a functional block diagram of one at least EGCM 1b. The top surface of said EGCM 1b is referenced as 63. The front surface is removed to show internal contents. The side that in this NLE accommodates one at least reversible attachment means 6, is represented by surface 20. The bottom surface is referenced as 64. The wall of the EGCM is referenced as 32, and is preferably constructed in part at least of plastic. One at least parts of one at least garments 10b are shown attached to reversible attachment means 6. One at least parts of one at least garments 10a are shown attached to a fixed attachment means. The attachment means 6 is preferably cylindrical in this embodiment. It is preferable that said cylindrical has some asymmetry (eg a coupled rectangular means 214) as shown in cross section in block drawing 40. Said asymmetry preferably provides a NLE of an alignment means to facilitate correct alignment when said attachment means 6 is linked with the receptacle means 8. It is preferable that the receptacle means 8 has a corresponding means (not shown) to accommodate said asymmetry. It is preferable that one at least retaining means (36) is included to preferably prevent unlinking of one at least reversible attachment means 6. A preferred method is to have the retaining means 36 fit into a slot and/or hole 216 in the reversible attachment means 6. It is preferable that one at least EGCM includes one at least propulsion means that preferably in the process of opening, propels one at least parts, of one at least garments and/or attachments, from one at least:- a) EGCM's, and/or b) parts of one at least garments and/or attachments. A NLE of said propulsion means 22 preferably includes the use of the coiled spring means located at the end of receptacle means 8. It is preferable that when attachment means 6 is placed into receptacle means 8 that the spring of said propulsion means 22 is compressed. It is preferable that when the restraining means 36 is removed from contact with the attachment means 6, that said spring preferably extends forcibly, preferably propelling said attachment means 6 in part at least, from said receptacle means 8, preferably facilitating unlinking of one at least reversible attachment means. A preferred NLE of a waterproofing means to protect part at least of the electronics and/or mechanical means of one at least EGCM from the washing/cleaning process, for example, protection against water and/or solvents; is represented by flexible membrane means 21. An end view is shown in block drawing 40 of Figure 3. In

this embodiment said membrane is preferably sealed to the outside wall 20 of one at least EGCM, forming a sac that preferably isolates the environment and attachment means from the internal means of one at least EGCM. It is preferable that said waterproofing means is resilient and it is preferably of low friction to facilitate insertion/removal of attachment means 6.

- 5 It is preferable that one at least EGCM includes a Retention Removal Means (RRM) 23 to facilitate removal of said retention means 36 from a location that prevents and/or impairs release of attachment means 6, to a location that facilitates release of said attachment means 6.
- 10 It is preferable that one at least EGCM includes a manual release means 38 to facilitate unlinking of one at least reversible attachment means from one at least EGCM. It is preferable that said manual means are coupled to one at least mechanical and/or electronic means. It is preferable that said manual means is protected from accidental activation. A NLE of said protection preferably may include recessing said manual means below the surface of the enclosure of one at least EGCM.
- 15 It is preferable that activation of said RRM 23 to facilitate release of said attachment means 6, is in response to one at least control signals 25 and/or power signals 26 that preferably originate from a control means 24 that is preferably coupled to one at least EGCM.
- 20 It is preferable that one at least EGCM is coupled to a power source means. It is preferable said power source is portable and/or may be recharged. It is preferable said power source is a battery and/or capacitor and/or light energy means (eg solar cell). It is preferable that said power source is within the case of said EGCM. It is preferable that the power source coupled to one at least EGCM may provide power for one at least second EGCM. It is preferable that when one at least second EGCM receives
- 25 power from means coupled to one at least first EGCM, that said reversible attachment means may be used to conduct the power and/or signal means.  
A NLE of a power source means 29 is shown in block drawing 41 of Figure 3. The power source means is preferably a battery (eg Ni Hydride, Lithium, Rechargeable Lithium) and/or a capacitor means. It is preferable that a positive terminal 31 and ground terminal 30 are accessible to the
- 30 environment. As a NLE, this may facilitate recharging. It is preferable that said power source means 29 is coupled to the control means 24. Said coupled preferably includes a positive power rail (and/or circuit trace) 27 and a ground rail (and/or circuit trace) 28.
- It is preferable that one at least EGCM includes an input and/or output means 35, that preferably
- 35 interfaces processing and/or storage means coupled to control means 24, with external means. It is preferable that in response to one at least input means (8) and/or in response to one at least control means coupled to one at least EGCM, that one at least reversible attached means is unlinked, preferably using propulsion means 22 to ensure a clean uncoupling.
- 40 Reference to Figure 4 of the drawings may assist understanding of the next part of the description. *Block drawing 60a of Figure 4* shows preferred NLE's of attachment means and retaining means. Attachment means 6 is shown with a bevel means 51 and a retaining means 36 that includes a matching bevel 52. When attachment means 6 is inserted into receptacle means 8 it is preferable that the beveled arrangement facilitates said insertion. Preferred NLE's of propulsion means are coiled spring 47a and/or
- 45 lever arm 55 that is tensioned when attachment means 6a is inserted in to receptacle means 8. *Block drawing 60b of Figure 4* shows a preferred NLE of a receptacle means 8 with a polarising slot 6 and an attachment means 6e that includes a corresponding polarising key. *Block drawing 60c of Figure 4* shows a NLE of a preferred means of implementing a Retention Removal Means (RRM) in one at least EGCM.
- 50 It is preferable that there is tensioning means 73, that as a NLE may be a coiled spring means, to assist the retaining means 36 to remain in position to retain one at least reversible attachment means 6. When said attachment means 6 is in place, it is preferable that spring means is extended in part at least, preferably pushing and holding said retaining means 36 in a location to retain said attachment
- 55 6. The unlinking of one at least reversible attachment means 6 preferably requires a force to be applied to said retaining means 36 in a direction that preferably frees said attachment means for

unlinking. Said force is preferably sufficient to overcome that provided by tensioning means 73 plus any other resistance that may need to be surmounted.

NLE's of said force preferably may be applied by one at least of the following non-limiting work means:-

- 5       • a motor driving cogwheel 65 that preferably includes teeth 66 that engage with teeth 67 on retaining means 36;
- an electromagnet 72 that preferably may be made to apply a magnetic attractive force on a magnetic means 74 (eg, iron);
- 10       • manual release means that may include a handle means 79 external to one at least EGCM that is preferably coupled to a release coupling means 71 (eg a plastic rod) via a preferably flexible link 78, that is preferably sealed to a flexible membrane 80 that preferably facilitates waterproofing of said EGCM, said force preferably may be applied by pulling handle means 79;
- 15       • the known art also describes deformation means 75 that may be made to change shape under the influence of an electric current, some means may contract and others may expand and/or otherwise deform; in the present example 75 is a contractile means coupled to retaining means 36 at location 77 and to an anchor means 76, preferably coupled to the enclosure of said EGCM; passage of current via 75 preferably contracts deformation means 75 applying a force on retaining means 36;

20 It is preferable that one at least work means is activated by passage of current through ground/power conductors 68 and 69. Said conductors are preferably coupled to control means 24 and are preferably switched by means coupled to said control means 24. *Block drawing 60d of Figure 4* shows a preferred NLE of a means of protecting manual release handle 79 by recessing 64 the case of the EGCM. The is  
25 preferably a snap clip means 81 to hold handle 79 in place. *Block drawing 60e of Figure 4* shows a preferred NLE of said work means referenced as a *Micro Steam Engine Means*. A fluid (eg water) 85 is preferably sealed 84 in a chamber. It is preferable that current may be passed through conducting means 86. This preferably heats fluid 85 that expands pushing piston 82 out from cylinder 83. Piston 82 preferably exerts a force on retaining means 36 that free the attachment means to unlink, preferably  
30 opening the garment closure.

Reference to *Figure 5* of the drawings may assist understanding of the next part of the description. This shows a detailed picture of the attachment means 6 and receptacle means 8. In this preferred example the waterproofing means 49 preferably is limited to the area over the retaining means. When attachment  
35 means 6 is unlinked as shown in *block drawing 50a* propulsion means 22 (preferably driven by spring means 47) preferably prevents retaining means 36 extending into receptacle means 8. This preferably permits attachment means 6 to be readily inserted into receptacle means 8 as shown in *block drawing 50b*. When attachment means 6 is inserted retaining means 36 preferably fits into the socket means 45 of attachment means 6. Waterproofing means 49 is preferably reversibly distorted in the process and also  
40 pushed into socket 45.

Reference to *Figure 5* of the drawings may assist understanding of the next part of the description. The input means of *block drawing 35 of Figure 5* preferably include one at least externally supplied signals that are preferably received and/or processed by control means 24. Said externally supplied signal  
45 preferably may include, as NLE's, one at least of the following:- a) Button switch (eg membrane switch) 101 that preferably generates one at least electrical signal to control means 24 when activated (eg when pressed) (101 preferably may perform the function of a reset means); and/or b) receipt of a radio frequency means via aerial 96; and/or c) receipt of an infrared and or optical signal means preferably by photo detector 100; and/or d) microwave signal (eg, received by preferably internal aerial (40); and/or e)  
50 receipt of a sound wave by audio input means 103, a preferred example including a microphone means; and/or f) input signal means 107 from one at least coupled decorative means and/or one at least other EGCM, with the preferred means including electrical signals on a conductor means and/or fibreoptic.

The output means of *block drawing 35 of Figure 5* preferably include one at least means that are  
55 preferably generated and/or processed by control means 24 and preferably transmitted to means external

to said EGCM. Said externally transmitted means preferably may include, as NLE's, one at least of the following:- a) R/F transmitter means 97; and/or b) I/R diode means 98; and/or c) optical LED means 99; and/or d) sound generating means 102 ( the preferred examples including speaker and piezo means); and/or e) output signal means 104, and/or Power Rails 105, and/or Ground Rails 106 and/or to one at least coupled decorative means and/or one at least other EGCM, with the preferred means including electrical signals on a conductor means and/or fibreoptic.

NLE of as suitable R/F transceiver preferably may include one at least of:- a) the Ultra Low Power CMOS Transceiver from Xemics (the data sheet for this device - the XE 1209 is incorporated by reference); b) Blue Tooth; c) Zigbee; d) 802.11.

It is preferable that memory storage means coupled to one at least EGCM's include one at least of the following:-

a) *ID Means*. It is preferable that there is a means to identify one at least EGCM's. NLE's may include one at least digital ID means:- a) that are unique to said EGCM's; and/or b) that are unique to a group of EGCM's. It is preferable that one at least digital ID means may be modified after manufacture (eg, by the model and/or third parties). It is preferable that there is one at least means to read and/or otherwise obtain information about said ID means. Said read is preferably by means internal and/or external to said EGCM. Said external preferably may include one at least PCCM and/or a remote means. It is preferable that said unique to a group may be to part at least of the EGCM coupled to one at least garments; and/or to garments in the possession of said model.

- It is preferable that said ID Means are stored in Flash Memory. It is preferable that MEGCM's include their own ID Means and ID Means of SEGM's that they may control.

b) *Image Map Means* of coupled garment. It is preferable that a picture (eg stored as JPEG image) of the garment that said EGCM is coupled to is stored in said memory. It is preferable that sufficient information is stored to show said garment from plural perspectives. It is preferable that sufficient information is stored to allow a 3d image of said garment to be constructed on a UCDDPM. It is preferable if there is sufficient information stored to allow rotation of said 3d image on said UCDDPM. It is preferable that the locations of one at least EGCM's coupled to said garment are shown on said image. It is preferable that the ID Means of one at least said coupled EGCM's may be shown on the image.

It is preferable that one at least EGCM's is coupled to a means to permit information (eg digital data and/or programs) to be read from said EGCM and/or written into said EGCM. The preferred means is to have said data read and/or written by one at least PCCM. As a NLE the preferred method is to have one at least EGCM's enter a mode after switching the unit on and/or after reset where it waits for an external signal (eg RF and/or IR from a PCCM). Preferably if the said EGCM receives an activation code in this time it will enter a mode where it waits for a EGCM Refresh Command (preferably with time out means) instructing it to further action. As NLE's said *EGCM Refresh Command* preferably may request said EGCM to perform one at least of the following:- a) provide the data stored in its Real Time Clock Means (RTCM); b) accept new data for said RTCM; c) provide one at least ID Means stored in said EGCM and preferably provide this information sequentially in response to external commands and preferably illuminate the LED coupled to the EGCM matching said ID Means; d) accept one at least ID Means and store it in one at least coupled EGCM's and preferably receive this information sequentially in response to external commands and preferably illuminate the LED coupled to the EGCM that is allocated to said input ID Means; f) provide part at least of data and/or stored programs to an external means (eg PCCM); g) receive and store data and/or programs from an external means; h) transfer part at least of said Image Map Means to external means; i) receive and/or store part at least of an Image Map Means from an external Means.

It is preferable that said EGCM is coupled to one at least realtime clock and/or calendar means 127. It is preferable that there is a means to provide power to said realtime means. It is preferable that there is a means to read the contents of said realtime means. It is preferable that there is a means to modify the contents of said realtime means.



It is preferable that one at least EGCM's are coupled to *Limiting Means*, wherein said limiting means preferably may prevent, and/or restrict, and/or control, and/or condition as a NLE the opening of one at least EGCM's, preferably until one at least *End of Limit Means* (ELM) is activated and/or enabled. It is preferable that said ELM may be coupled to said EGCM. It is preferable that said limit means and/or ELM may be coupled to one at least PCCM.

It is preferable that one at least EGCM includes Memory Storage Means, NLE of which preferably include one at least of:- flash memory 131, ram 130, battery-backed RAM 129, eeprom (not shown), DRAM 132. Control means 24 preferably includes a microprocessing means.

It is preferable that there is a means 135 to detect when the manual release means has been activated. As a NLE this may trigger one at least EGCM and/or PCCM's to output an audible and/or visual response (eg the word 'jerk'). One non-limiting reason for this may be to encourage uncoupling using said remote means.

It is preferable that there is a limit detect means 134 to detect when the restraining means has reached its limit (this preferably cuts off the power to the work means).

It is preferable that there is one at least *ELM Reset Means* to inactivate and/or disable and/or reset and/or set said ELM, as a NLE. Said ELM reset means is preferably coupled to said EGCM and is preferably activated by means coupled to and/or remote to said EGCM.

Preferred NLE of garments and coupled EGCM's are described with reference to Figure 7 of the drawings. Model 250a is shown with PCCM 200. The garment shown is an evening dress that is preferably constructed in part at least of plural EGCM's 505 that are preferably constructed from a variety of shapes. It is preferable one at least EGCM is a MEGCM and one at least EGCM a SEGCM. The attachment means 510 preferably form a linking means and in part at least conducting means for power and/or signals. Said EGCM's 505 and linking means 510 preferably form an integral part of the fabric of part at least of said dress. Said linking means preferably come unlink under the means described for the present invention.

Model 250b shows a preferred arrangement for lingerie and/or swimming costumes. The bra 290 preferably includes a flap over the right nipple area (501) and/or the left nipple area (500). Said flap(s) preferably may be opened by opening one at least of the three EGM's coupled to each flap. The bra 290 preferably includes MEGCM 257 and SEGCM's 268 and 273. The bra is preferably coupled to one at least EGCM and the back (not shown) to facilitate automated removal of the garment. The panties 291 preferably include MEGCM 256 and a front flap 291a that preferably may open with the opening of SEGCM's 264b, 264c and 264d. The panties preferably fall away when MEGCM 256 and/or SEGCM 264a open. It is preferable that the rear of the panties (not shown) includes a flap similar to that the front flap 291a.

A preferred embodiment of a *Personal Closure Control Means* (PCCM) 200 is now described in further detail with reference to Figure 8 of the drawings.

It is preferable that the construction of the PCCM (200) is modular to allow part at least of the means described for said PCCM to be added after manufacture and/or sale. Said PCCM preferably includes a model coupling means 405 to facilitate wearing of said PCCM by a model. It is preferably constructed of injection mould plastic in part at least. It is preferable that one at least commands may be entered said PCCM using one at least switch means 407. One at least switch means is preferably a reset means. It is preferable that one at least commands may be entered by said microphone means 406. It is preferable that a command menu may be scrolled through using display means 241 and/or a spoken version using speaker means 241. One at least PCCM 200 preferably includes a GPS means 244 and/or realtime clock means 283. Said PCCM preferably includes one at least means to communicate with external means. Preferred NLE's include one at least of RF Means 265 (eg 410 bluetooth, (411); 802.11 (412); Zigbee 412; Garage Remote Control Means 413); and/or IR means. NLE's of said IR preferably include one at least of TV RMC IR (400) and/or IrDa 401. Said PCCM preferably includes an ID Means 417 (preferably

unique). Said PCCM preferably includes CPU and memory storage means. Said PCCM preferably includes a means (eg mechanical protrusion 244 on end of PCCM) to facilitate actioning recessed switch means on one at least EGCM's. It is preferable that one at least PCCM may include one at least of the means described for other parts of the invention. Said PCCM 200 preferably includes DSP means and  
 5 preferably may support voice recognition and/or image processing. One at least PCCM's preferably may support one at least of the interface functions to other means described in this specification. Said PCCM preferably includes data and/or programs to perform the functions described for it in this specification.

10 It is preferable that one at least PCCM (400) includes a means to detect I/R in the frequencies commonly used by TV Remote Control Units and/or other AV Control Means. One preferred embodiment would allow an operator (eg the model's boyfriend/girlfriend, and/or the model) to use a TV (and/or other AV) remote control means to remotely open one at least EGCM's coupled to said PCCM.

15 The invention preferably allows for the opening of one at least closures by automated means to be in part at least a response to one at least commands and/or other information sent as one at least Information Text String Means (ITSM) sent from a remote means to a target means. NLE's of said target means preferably include one at least EGCM's and/or PCCM's. NLE's of said remote means preferably include a Remote Undressing Means (RUM).

20 Said ITSM preferably includes alpha and/or numeric indicia. Said indicia are preferably ASCII coded. Said ITSM preferably has a header (eg @#%) and an ending sequence (eg %\$#@). The invention preferably allows said ITSM be constructed in part at least from a *Standardised Text Library* (STL) that preferably includes words and/or phrases preferably used with the means of the present invention. As a NLE it may include part at  
 25 least of:- alphanumerics; yes; no; open; PICM; bra; cup; panties; underpants; 'next closure'; 'skip closure'; 'skip back'; undo; nipple flap; pubic flap; rear flap; top; bottom; left; right; central; closure; selection of colours; diamonds; hearts; pearl; clubs; spades; 'I Love You'; 'game mode'; 'party mode'. It is preferable that the target means (as a NLE, one at least EGCM's and/or one at least PCCM) includes and/or may be programmed with part at least of said STL. It is preferable that said STL coupled to said  
 30 target means may be edited and/or updated. It is preferable that the contents of said STL are under the control of one at least authorised providers.

NLE of said ITSM preferably includes one at least of *Positional Description Means* and/or *Symbolic Description Means* and/or *Pulsed Count Description Means*.

35 • The following NLE may assist understanding the use of ITSM:- a model may be wearing a bra that includes a flap covering the left nipple area. Said flap preferably may be held in place by one at least EGCM's. One said EGCM is located in the top left corner of said flap. Said EGCM is coupled to a decorative means that includes two pink coloured hearts. Said EGCM outputs a  
 40 PICM Numeric Value of three. A NLE of a *Positional Description Means* may be - 'undo top left closure left nipple flap'. A NLE of a *Symbolic Description Means* may be - 'open two pink hearts' - somewhat more romantic than the preceding example. A NLE of a *Pulsed Count Description Means* may be - 'open PICM thrée'.

45 It is preferable that one at least target means includes and/or is coupled to:-  
 • part at least of said *Standardised Text Library* (STL); and/or  
 • database of one at least automated closure means that said target means may influence (preferably directly and/or indirectly), and preferably the  
 50 • *Positional Description Means* and/or *Symbolic Description Means* and/or *Pulsed Count Description Means* (collectively referenced as *Descriptor Means*) relating to said one at least automated closure means, and preferably  
 • the EGCM ID Codes and/or subcodes of said one at least automated closure means, and preferably

- a means to cross reference said Descriptor Means with said EGCM ID Codes and/or subcodes;
  - a means of parsing incoming Descriptor Means from remote means and determining if said incoming information matches information stored in the Target Means Database;
  - a means of determining if there are Access Limit Means applicable to the granting of opening rights to one at least closure means;
  - a means of facilitating the opening of one at least closure means.
- 10 It is preferable that said ITSM may be constructed in part at least from a *Custom Text Library* (CTL). It is preferable that said CTL includes a lookup table to cross reference custom text descriptor commands with STL text descriptor commands. For example, the model may want to reference the EGCM of the preceding example (two pink hearts) as the '*magic love button*' and it is preferable said lookup table cross references the phrase '*magic love button*' with STL created phrase 'two pink hearts'.
- 15
- It is preferable that said CTL may include one at least questions that a third party may be required to answer in order to gain access to the opening of one at least automated closure means.
  - It is preferable that said CTL may include one at least answers to said one at least questions.
  - Said CTL is preferably created and or edited on a personal computer means and/or downloaded in part at least as templates from the Internet. Once created said CTL is preferably copied to one at least target means. The invention preferably includes a means to copy part at least of a CTL from a User Controlled Data Processing Means (UCDPM) to a Target Means of the present invention. The invention preferably includes a means to transfer a CTL in part at least from said Target Means to a UCDPM for editing.
- 20
- 25 One at least PCCM preferably has a microphone input means that as a NLE, preferably may accept voice commands to facilitate the automated opening of one at least closures coupled to garments under the control of said PCCM. It is preferable that one at least PCCM may accept voice commands to perform one at least utility operations on said PCCM ( eg menu selection, editing, data transfers as NLE's). It is preferable that there is a means to load said PCCM with a voice library of one at least persons who may issue voice commands (and/or other information). Said voice library preferably includes digitised speech. It is preferable that there is a *Standardised Vocal Library* (SVL) that preferably includes words and/or phrases commonly used with the means of the present invention. Said SVL preferably includes part at least of the Standardised Text Library. A preferred NLE is for one at least operators to create and/or store part at least of their Personal SVL in one at least Remote Means 247 (preferably with the assistance of a UCDP) and to transfer said Personal SVL to one at least PCCM. Said PCCM preferably may then reference one at least stored Personal SVL and compare it with subsequent incoming sound means. A preferred NLE to prepare a Personal SVL, is to provide a computer program on a UCDPM (preferably including support from the Internet) that displays part at least of the Standard Text Library (STL) and asks the user to speak into a microphone means coupled to said UCDP, the words and/or phrases from said STL that are displayed. The result of this process preferably may be transferred to one at least PCCM's and/or RUM's. The invention preferably allows for the use of Customised Vocal Library (CVL) and the application and/or preparation of Personal CVL's preferably is similar to that described for SVL's. Said CVL preferably includes digitised speech representing part at least of one at least Custom
- 30
- 35 Text Libraries. The invention preferably allows that one at least PCCM may receive voice commands in part at least in a digitised format (eg voice commands preprocessed by one at least RUM's). It is preferable that this may be handled as for direct incoming sound with the exception that part at least of the digitising may already have been performed.
- 40
- 45
- 50 The PCCM preferably includes a means (eg CPU (210) to process the data sent from said TV remote control means to determine if a valid password was sent, and if valid to allow further remote commands to be accepted. Said CPU (210) is preferably coupled to a non-volatile memory storage means eg Flash Memory (211).

The PCCM preferably includes a means to receive commands to open one at least closures (eg numeric codes and/or up and/or down channel button from said TV remote control means) and preferably includes a means to process this information and preferably includes a means to transmit a command to the relevant EGCM(s) to open one at least closure.

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The invention preferably allows for the coupling of precious metals and/or semiprecious metals and/or precious stones and/or semiprecious stones to one at least EGCM's and/or PCCM's.

10

It is preferable that one at least UCDPM preferably in conjunction with the Internet may be used to program the closure opening sequence and/or limits placed on said openings. The preferred method is to load an image of one at least garments from the coupled EGCM's using one at least PCCM's to read the data from said EGCM and to transfer it to said UCDPM. Said image is preferably displayed and preferably may be rotated. EGCM's coupled to said garment(s) are preferably shown. One at least said EGCM's is preferably shown coupled to a menu means that preferably permits one at least limits to be applied. NLE's of said limits preferably may include one at least of a) the time of opening; b) geographic locations of opening; c) responses required from an operator to permit opening; d) the number of events that must take place for opening to occur (eg a song may be required to sing the phrase 'strip your booties' 5 times prior to one at least closures opening). The actual control is preferably in part at least by one at least PCCM coupled to said EGCM's. After the garment(s) openings are suitably programmed on said UCDPM, the resultant control information is preferably transferred to one at least PCCM's. It is preferable that one at least UCDPM and/or Internet connections may be used to create garment image means for subsequent transfer to one at least EGCM's.

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It is understood that variations in the figures or described elsewhere in this specification are for illustrative purposes only and that many other variations will be apparent to one skilled in the art. It will also be understood that the specification and figures are illustrative of the present invention and that other embodiments within the spirit and scope of the invention will suggest themselves to those skilled in the art.

30

35

40

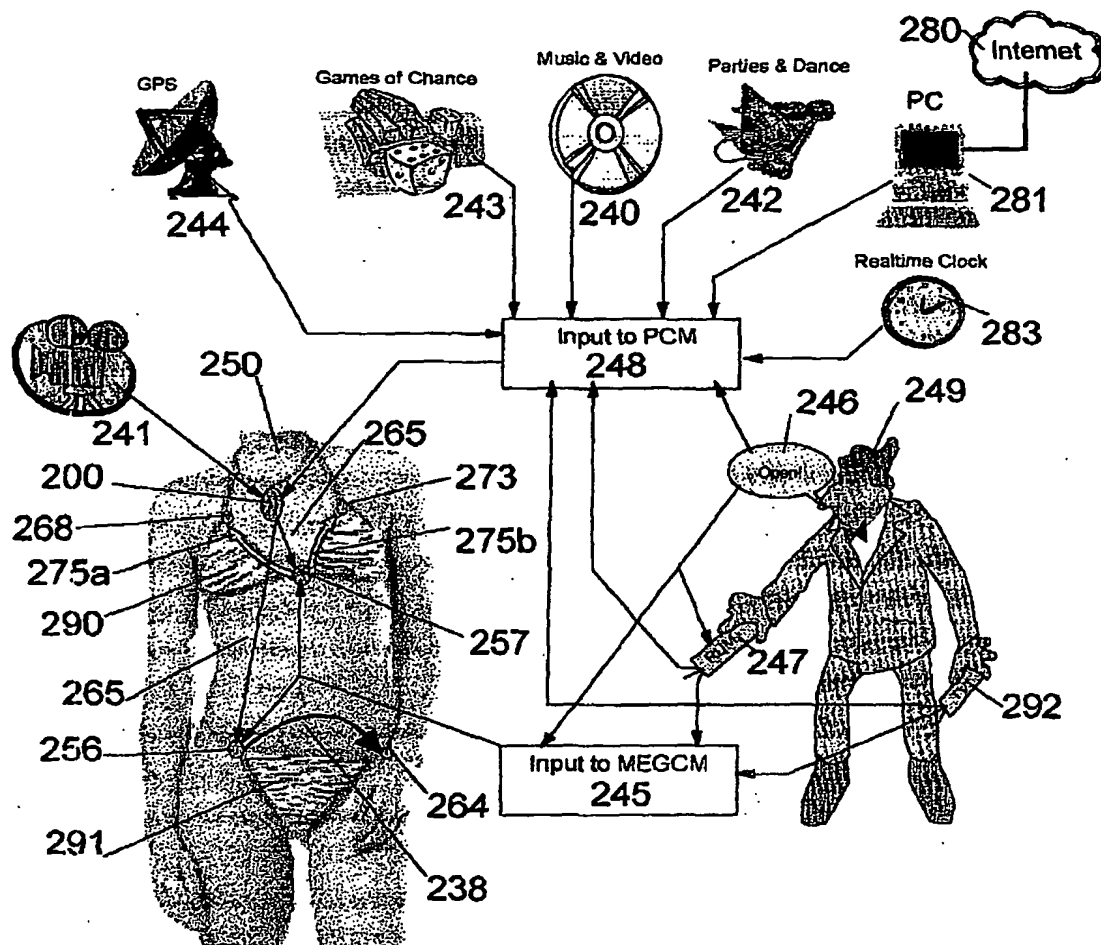
45

50

55

**Claims**

- 1) A garment having at least one closure that is closed by a garment closure means wherein opening of said closure means is facilitated by one at least automated means coupled to said closure.  
5
- 2) The garment of claim 1, wherein the garment comprises one at least of lingerie, bathing suit, jacket, top, dress, skirt, and evening wear.
- 3) The method of using automated means in the removal of one at least garments from a model.  
10
- 4) The method of facilitating the removal of one at least garments from a model in response to one at least remote signals.
- 5) A garment closure means influenced to open by automated means.  
15
- 6) A garment closure means influenced to open by remote means.
- 7) The method step of issuing one at least commands from a means remote to the wearer of a garment that causes said garment to undo in part at least.  
20
- 8) A remote apparatus that transfers and/or facilitates transfer of information influencing one at least closures, on one at least garments on a model, to open in part at least.
- 9) A remote apparatus that facilitates the removal of garments from a model.  
25



### Figure 1

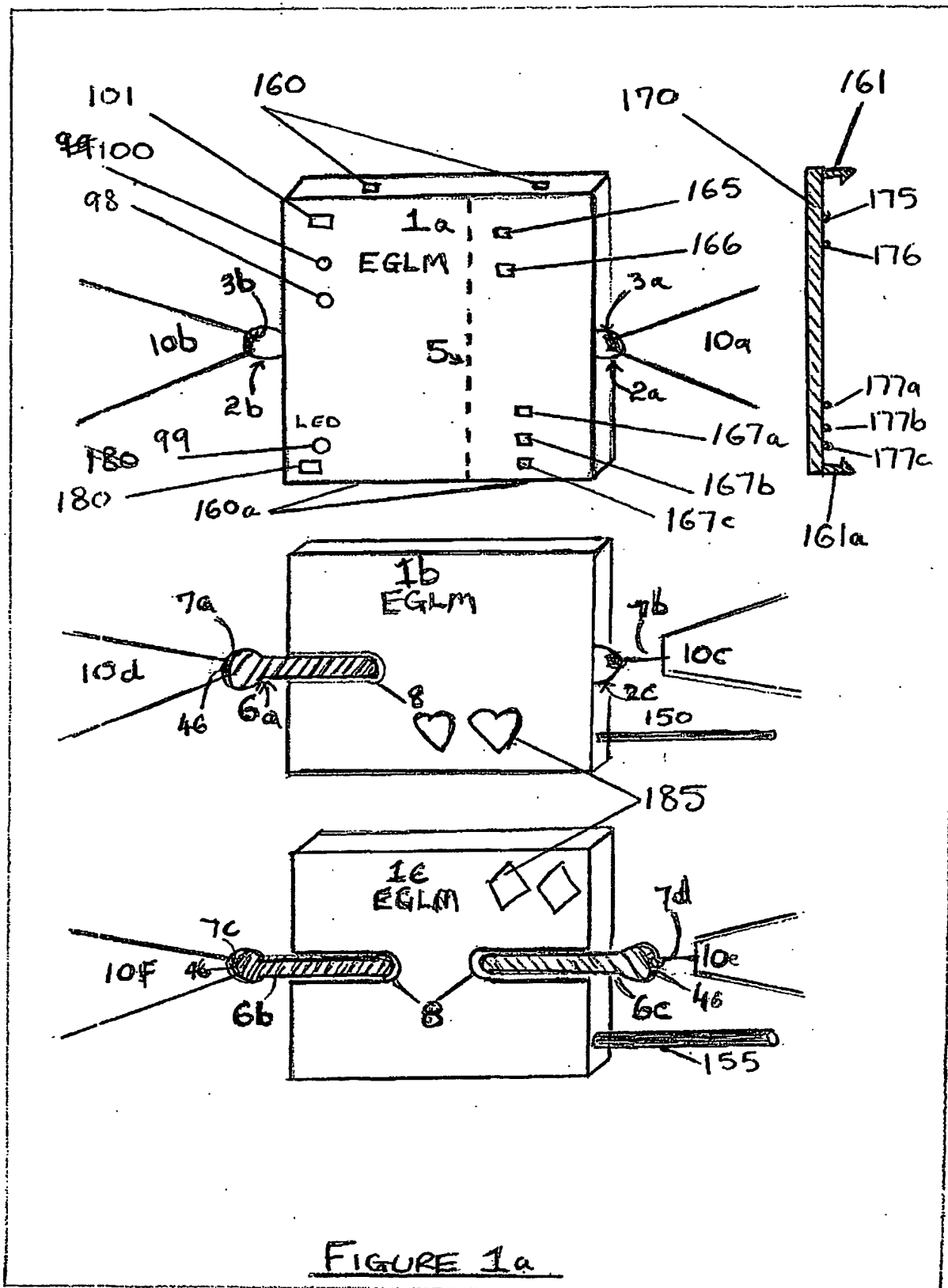
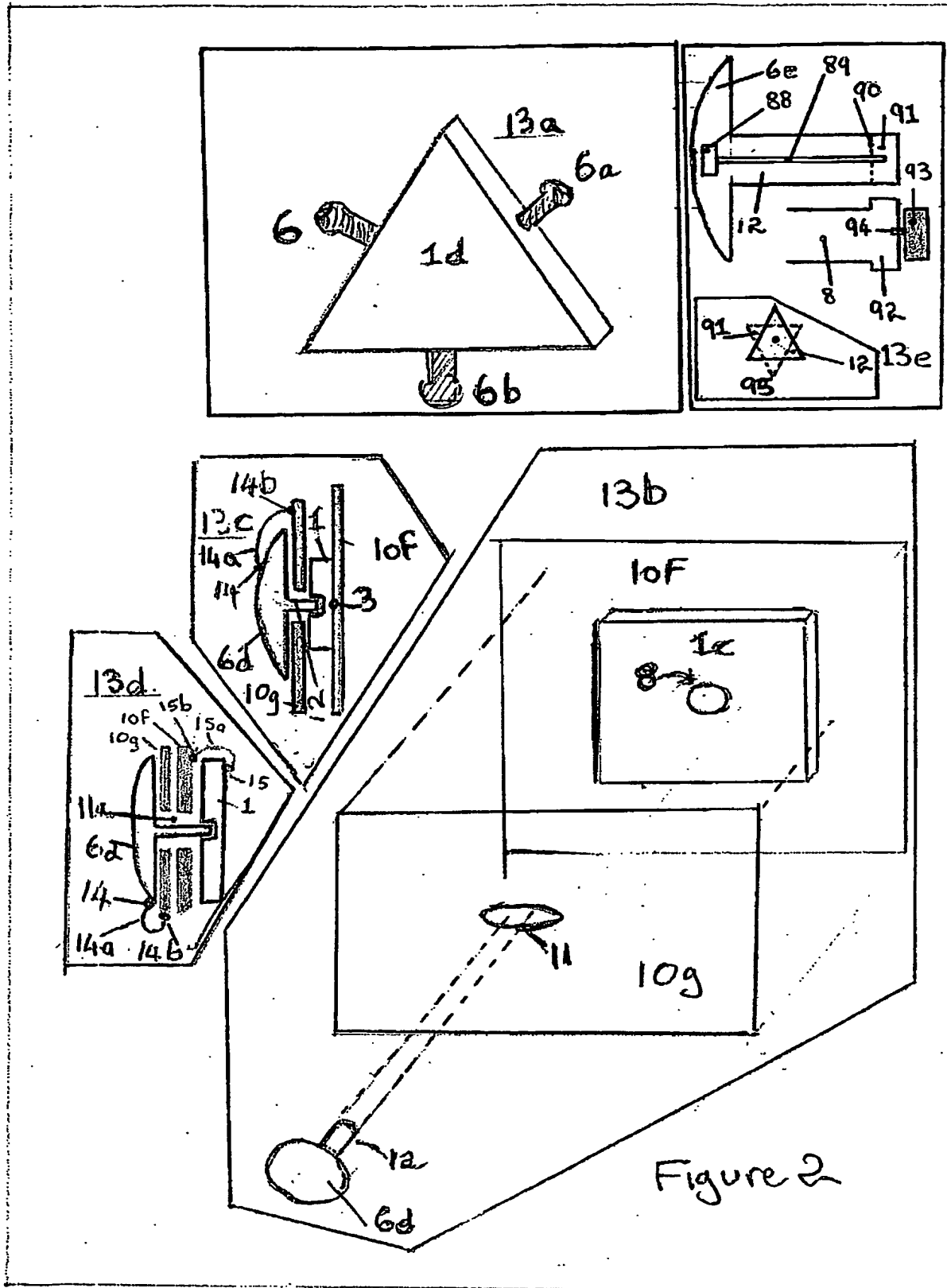
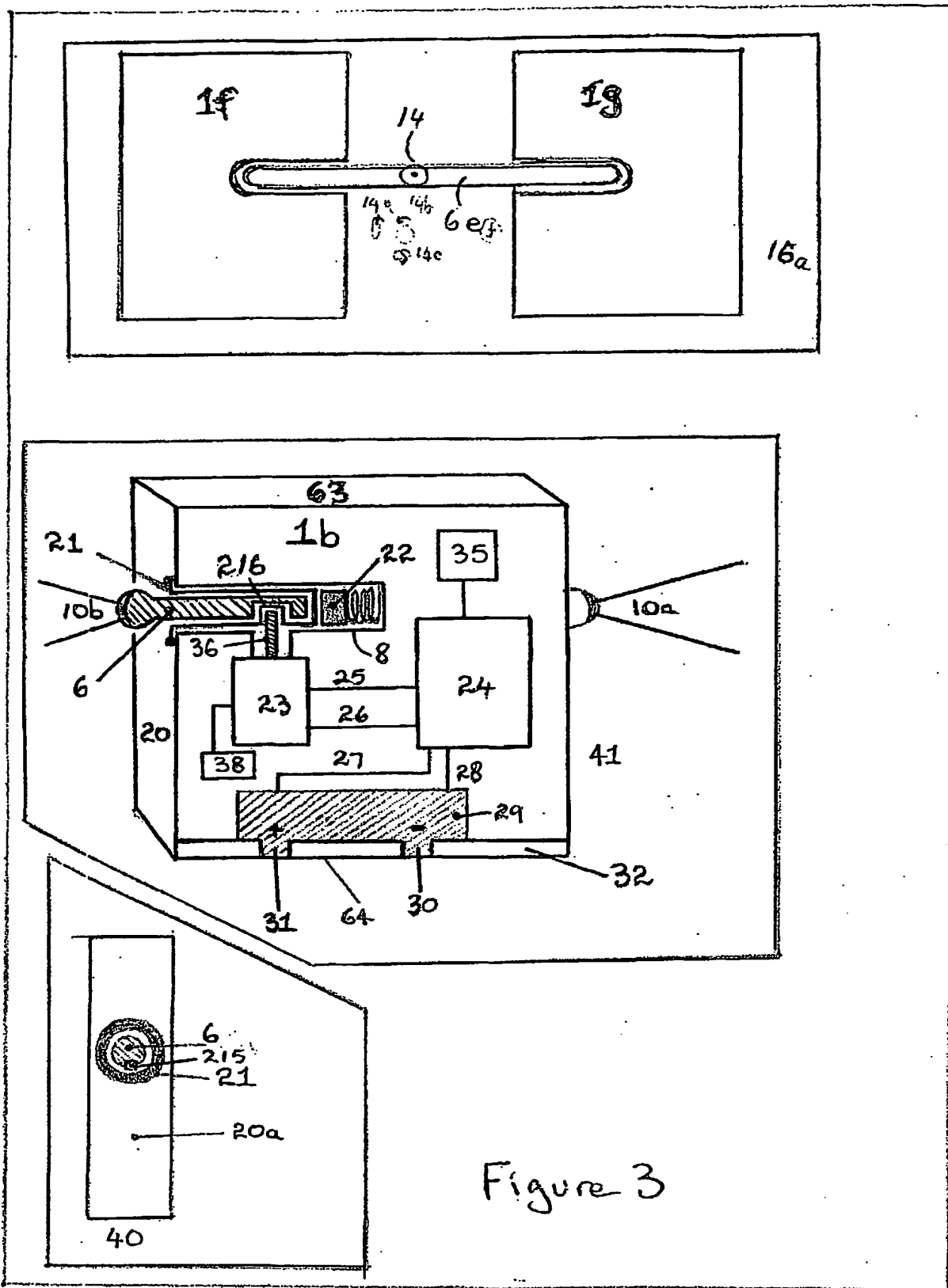


FIGURE 1a







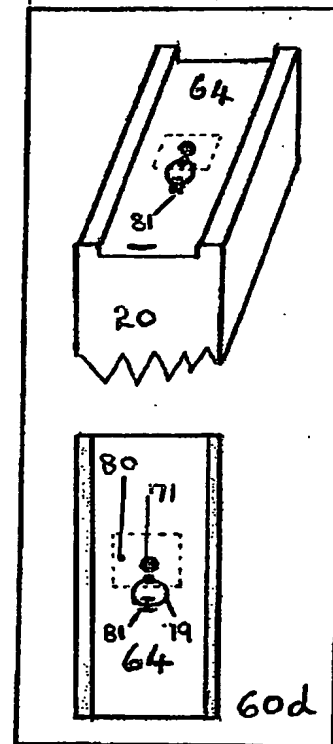
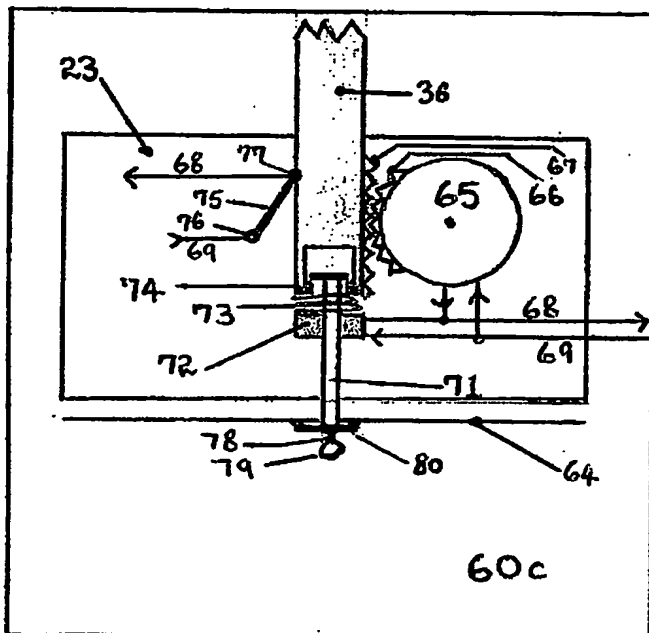
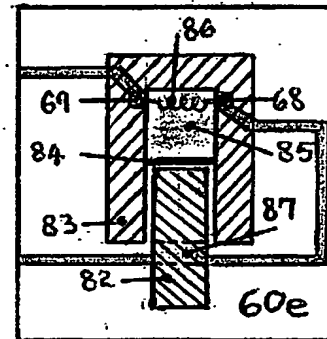
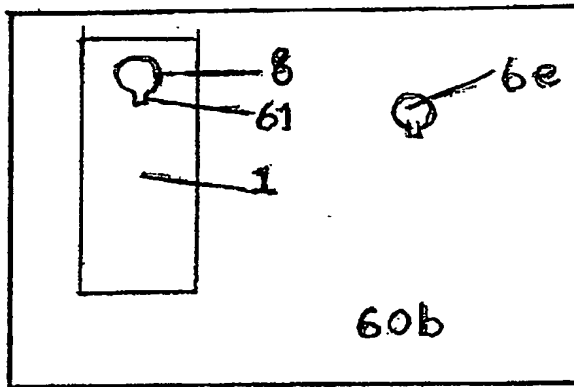
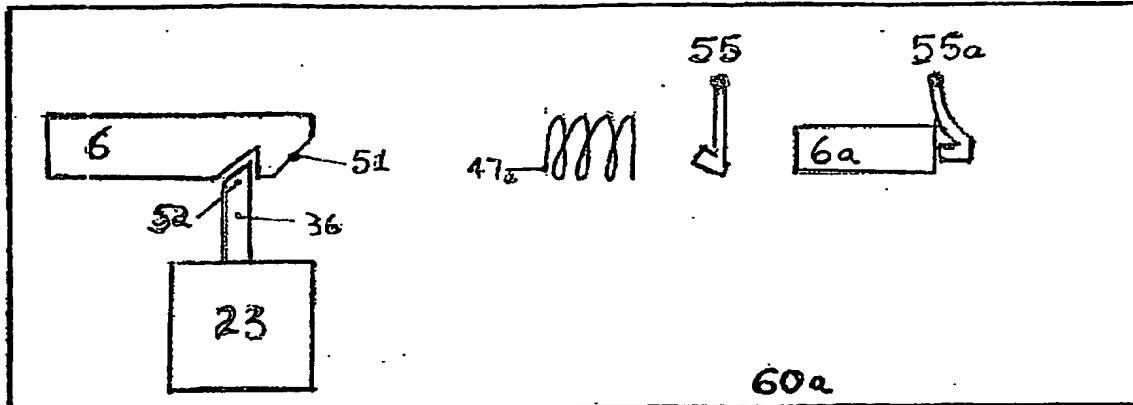
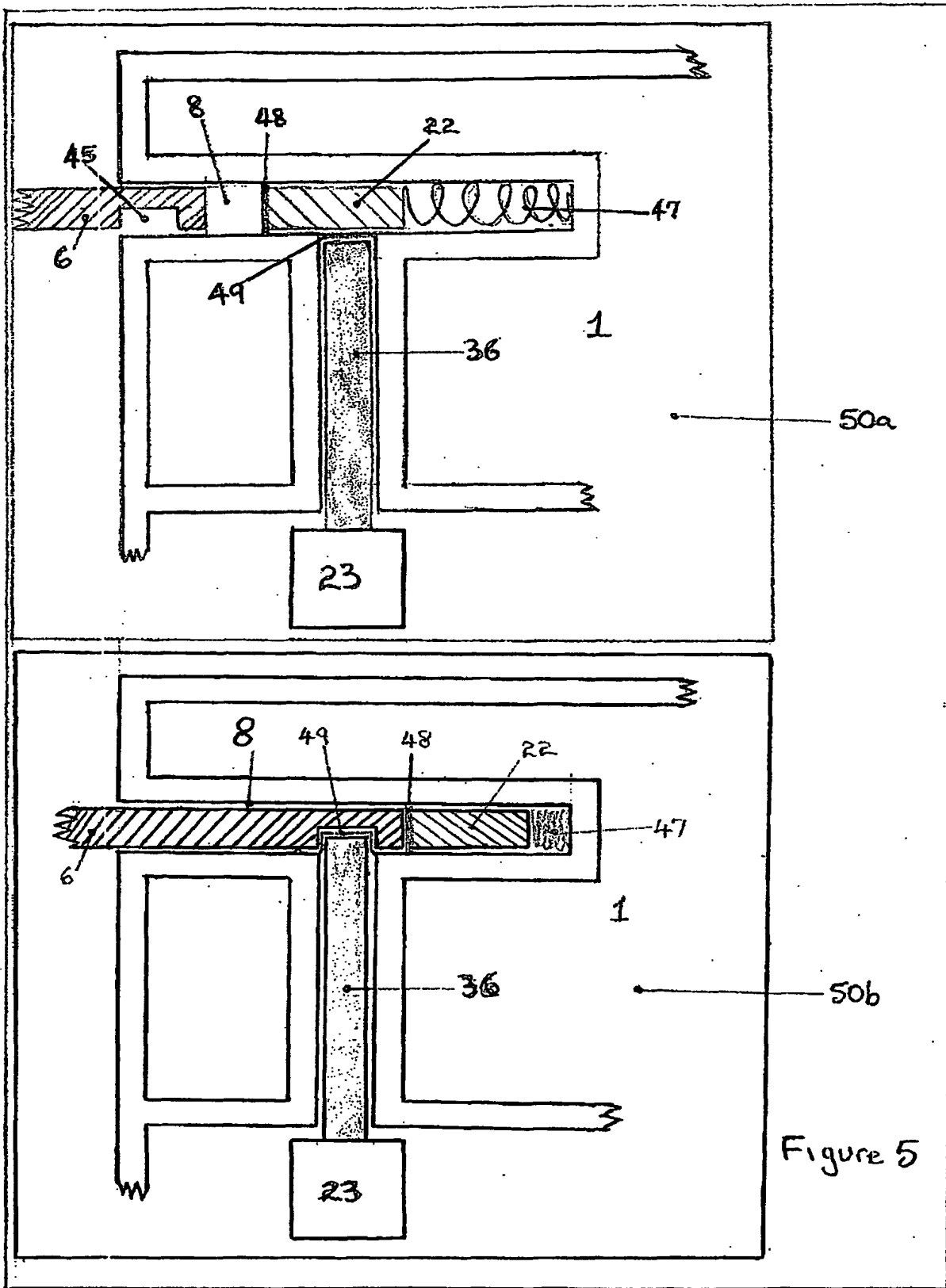
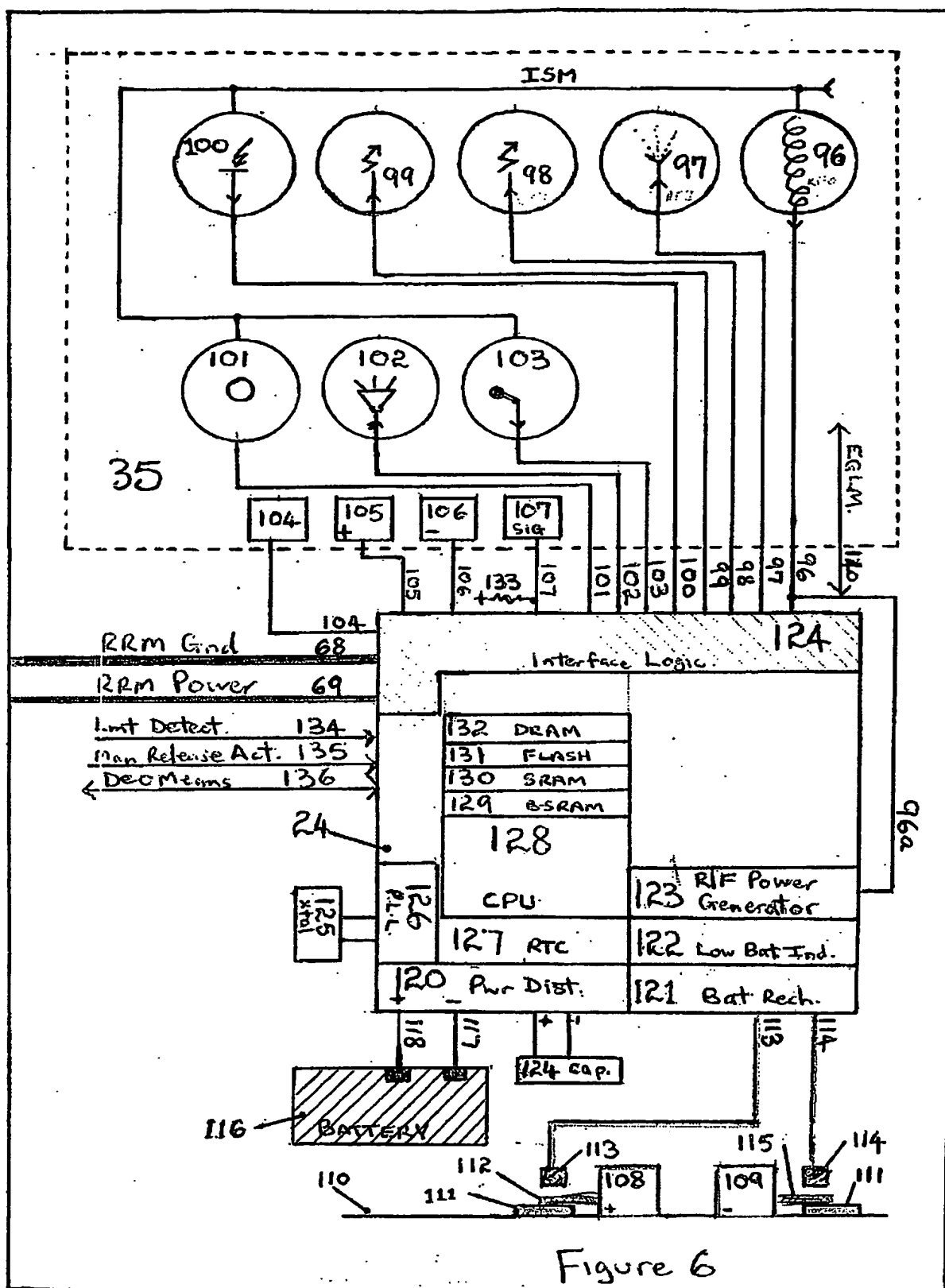
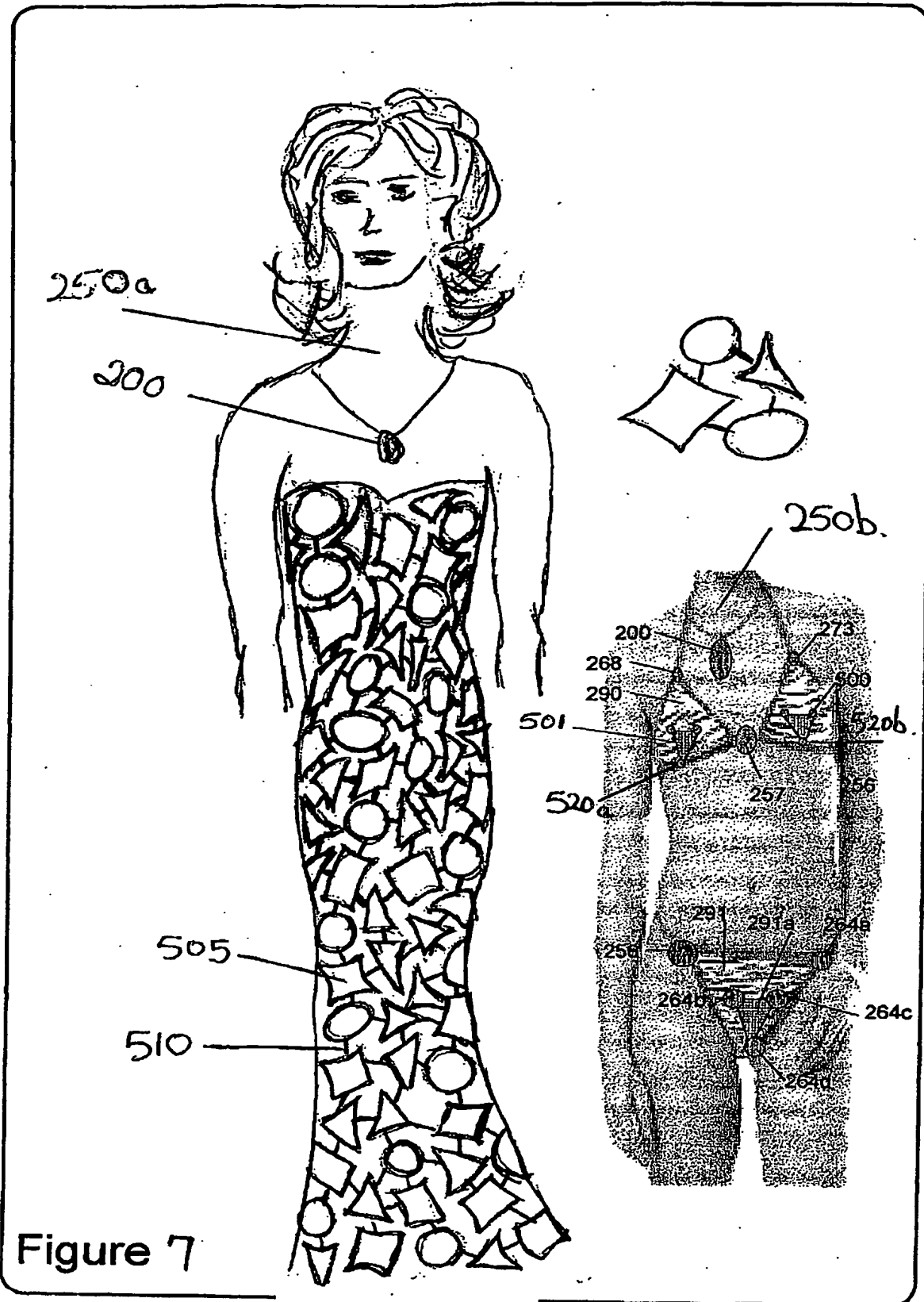


Figure 4







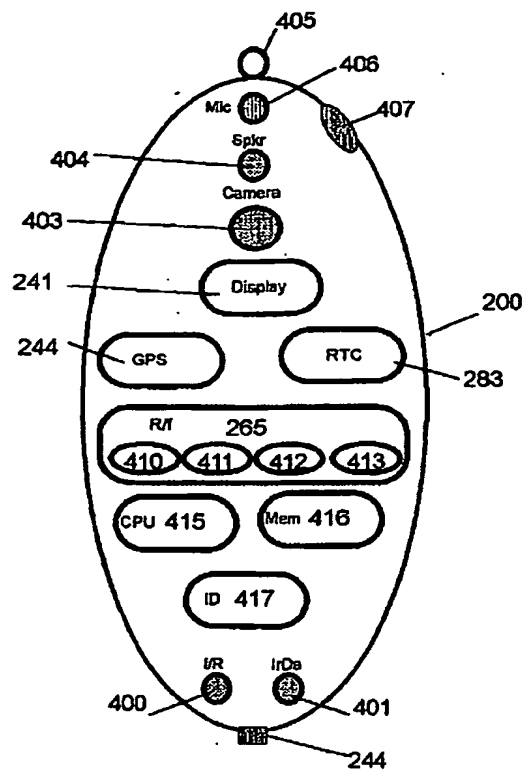



Figure 8

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/AU03/00769

|  |  |                       |
|--|--|-----------------------|
| <b>A. CLASSIFICATION OF SUBJECT MATTER</b>   |  |                       |
| Int. Cl. <sup>7</sup> : A41F 1/00  |  |                       |
| According to International Patent Classification (IPC) or to both national classification and IPC  |  |                       |
| <b>B. FIELDS SEARCHED</b>  |  |                       |
| Minimum documentation searched (classification system followed by classification symbols)  |  |                       |
| Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  |  |                       |
| Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)   |  |                       |
| DWPI and keywords: garment and closure and automatic and open and similar terms  |  |                       |
| <b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>  |  |                       |
| Category*  | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
| X  | WO 98/00041 A1 (POSCHIK) 8 January 1998<br>Abstract  | 1-9                   |
| X  | JP 2002-125722 A (NAKAMURA) 8 May 2002<br>Abstract   | 1-9                   |
| X  | US 5692275 A (FREEMAN et al.) 2 December 1997<br>Column 2 lines 42 to 49   | 1-9                   |
| <input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex                            |  |                       |
| * Special categories of cited documents:   |  |                       |
| "A" document defining the general state of the art which is not considered to be of particular relevance   | "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  |                       |
| "E" earlier application or patent but published on or after the international filing date  | "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone   |                       |
| "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)              | "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art |                       |
| "O" document referring to an oral disclosure, use, exhibition or other means   | "&" document member of the same patent family  |                       |
| "P" document published prior to the international filing date but later than the priority date claimed   |  |                       |
| Date of the actual completion of the international search<br>15 August 2003  | Date of mailing of the international search report<br>25 AUG 2003  |                       |
| Name and mailing address of the ISA/AU<br>AUSTRALIAN PATENT OFFICE<br>PO BOX 200, WODEN ACT 2606, AUSTRALIA<br>E-mail address: pct@ipaustalia.gov.au<br>Facsimile No. (02) 6285 3929 | Authorized officer<br><br>DAVID MELHUIISH<br>Telephone No : (02) 6283 2426   |                       |

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU03/00769

| C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT |  |                       |
|---|--|-----------------------|
| Category*   | Citation of document, with indication, where appropriate, of the relevant passages               | Relevant to claim No. |
| X   | US 4447084 A (JANKOWIAK et al.) 8 May 1984<br>Column 1 lines 17 to 28<br>Column 3 lines 10 to 14 | 1-3, 5                |



**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/PCT/AU03/00769**

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

| Patent Document Cited in Search Report |            |      | Patent Family Member |    |          |    |        |
|--|------------|------|----------------------|----|----------|----|--------|
| WO                                     | 9800041    | AT   | 1153/96              | AU | 33277/97 | EP | 912123 |
| JP                                     | 2002125722 | NONE |                      |    |          |    |        |
| US                                     | 5692275    | NONE |                      |    |          |    |        |
| US                                     | 4447084    | NONE |                      |    |          |    |        |
| END OF ANNEX                           |            |      |                      |    |          |    |        |